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Attorneys for Plaintiff  
Gemini II Ltd.

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

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GEMINI II LTD.,

08 Civ. 6334 ( ) ( )

Plaintiff,

**DECLARATION OF  
GAVIN BLADEN**

- against -

DERECKTOR SHIPYARDS CONN., LLC,

Defendant.

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GAVIN BLADEN hereby declares under penalty of perjury:

1. I am the Owner's Representative on the Gemini Project which is currently under construction at the Derecktor Shipyards Conn., LLC ("Builder") in Bridgeport, Connecticut. The Project Gemini is being constructed pursuant to a Vessel Construction Agreement between the Builder and Gemini II Ltd. ("Owner") dated as of June 30, 2005 ("Contract"). A copy of my curriculum vitae is attached as Exhibit 1 to this Declaration. A copy of the Contract (without exhibits) is attached as Exhibit 2 to this Declaration. A copy of Exhibit A to the Contract, namely the Specifications, is attached as Exhibit 3.

2. I was named as the Owner's Representative shortly after the Contract was entered into between the parties, and have been present at the Shipyard since the commencement of construction in September, 2005. Pursuant to the Contract, page 3, the Delivery Date was set

at November 30, 2007 except as may be changed pursuant to a Change Order. No scheduling impacting Change Orders have been agreed to in writing and signed by the Builder and the Owner, as provided in Article 2(h). As a result, the Delivery Date remains November 30, 2007. The Contract provides a fixed Purchase Price of \$27,094,498.00, including the payment of subcontractors. To date, the owner has paid in excess of \$20 million in payments to the Builder and subcontractors for work on the vessel.

3. The Builder did not complete the Vessel in a timely manner. Indeed, even as of today, approximately 25% of the work remains incomplete. The Builder has advised that its latest estimate of completion of the Vessel is June or July 2009, approximately 18 months after the Delivery Date required by the Contract.

4. During the end of April or beginning of May, 2008, I was advised by the Builder that it would move the Vessel to a structure that had been originally prepared for sandblasting work at the Shipyard. About two week ago, I was advised that the Builder would move the Vessel on Saturday, July 12, 2008 to this structure.

5. This structure consists of empty 40 foot containers that are stacked three high and form three walls. To the top of the containers is attached a corrugated aluminum roof structure. One entire end of the structure is open to the elements. I requested further information with respect to the structure. As described to me, the structure would only provide approximately 6 feet of clearance on either side of the Vessel, 11 feet of clearance at the stern of the Vessel, and 4 feet of clearance at the bow of the Vessel.

6. The building where the vessel has been housed in to date is much larger and affords much greater clearances on all sides of the vessel. These clearances in the current building have large mezzanine areas that permit fabrication, wood, metal, plumbing and electrical work stations, and storage of materials in easy access to the main deck of the vessel.

This layout clearly facilitates the construction operation of the Builder as well as the subcontractors. Attached hereto as Exhibit 4 are copies of pictures of the Vessel in the building it has been housed in to date.

7. I have been given limited information regarding the enclosure of the fourth side of the cargo container structure. The most recent information that I have received from the Builder is that they intend to install a fabric door on this fourth side. I was told that the door would not be ready for at least two weeks after July 10, 2008. I have not received any information with respect to the design of this door for this fourth side. The fourth side is approximately 68 feet long and approximately 50 feet high. Given the large area covered by the fourth side, I consider it important to understand the intended enclosure for purposes of proper climate control and protection from the elements. Other than the general comment that a door would be placed on the fourth side, I have not received any further information with respect to the planned enclosure of this fourth side.

8. I have also asked for a copy of the Certificate of Occupancy of the structure. The most recent request for the Certificate of Occupancy was made in a meeting on July 10, 2008 attended by Paul Derecktor, the managing director of the Shipyard and a partial owner of the Shipyard, John Gallagher, a vice president of the shipyard, Dr. Anthony Marlon, the beneficial owner of Gemini, and myself. At the meeting, Paul Derecktor and John Gallagher were asked if they had obtained a Certificate of Occupancy. They did not answer the question. The also did not provide us with a copy of the Certificate of Occupancy.

9. With respect to electrical power, I have been advised by representatives of the Builder that permanent electrical power is not yet connected to the structure and that that power would not be available on a permanent basis for "a week to two weeks." I also understand

that there are no plumbing facilities at the building, there are leaks that have not been addressed, and that heat is not available to the structure.

10. In addition, I have requested copies of the insurance policies required to be maintained by the Builder pursuant to Article 22 of the Contract. Pursuant to this same Article, the Builder is required to furnish the Owner with copies of all relevant insurance policies and endorsements. Late in the evening of July 10, 2008, I received a copy of a Renewal Certificate apparently issued by Traveler's. I have not received the policies. The Renewal Certificate does not include the insuring clauses, exclusions and conditions. As a result of this failure to provide the insurance policies, we are uncertain with respect to the precise coverage terms for the Vessel as well as any conditions, warranties or exclusions that may apply.

11. As of June 13, 2008, I observed that the Shipyard significantly reduced the crew of workers on the Vessel. From that date until the current date, the usual compliment of workers was reduced from approximately 40 workers per day to 5 or fewer workers per day. The work that has been accomplished by the Shipyard during this nearly four week period has been minimal at best with the majority of the effort being in preparations to relocate the Vessel. As a result of the work stoppage by the Builder, subcontractors who are at the Shipyard to complete the interior of the Vessel have been delayed in their work and have now advised that they would be leaving the site on July 14, 2008. We were advised that the interior subcontractor can no longer efficiently install the interior because of items that the Builder has still not completed.

12. The Builder advised me approximately two weeks ago that it planned to move the Vessel to the cargo container structure this Saturday, July 12, 2008. Because of the concerns raised by the conditions set out above, Gemini II objected to the move and instructed the Builder to re-commence work on a full time basis on the Vessel in its current location. We confirmed this instruction in a letter that I delivered on July 10, 2008 by email and on July 11,

2008 by U.S. mail pursuant to the notice provisions of the Contract. A copy of this letter is attached hereto as Exhibit 5.

13. On the morning of July 11, 2008, I met with John Gallagher to discuss the Vessel and its proposed move to the Container Building. I expressed the Owner's concern and objection about the proposed move.

14. Mr. Gallagher assured me at this meeting and confirmed in writing via email, that "Derecktor would not move Gemini to the container shed this weekend." Additionally, Mr. Gallagher stated that the Builder would complete the Container Building "get a Certificate of Occupancy before moving the boat to the building." A copy of this email is attached hereto as Exhibit 6.

15. Despite assurance otherwise, the Builder did in fact move the Vessel to the Container Shed during the morning of July 12, 2008 without the Owner's permission. Attached hereto as Exhibit 7 are copies of photographs of the Vessel in the Container Building.

16. On or about the morning of July 14, 2008, I visited the Bridgeport Department of Buildings, located at 45 Lyon Terrace, Bridgeport, CT. The purpose of my visit was to copy the permit applications filed by Derecktor with the Department and determine if a Certificate of Occupancy exists for the Container Building.

17. I met with Bruce Nelson, Deputy Building Inspector, who provided me with a copy of Derecktor's permit application which was filed with the Department on or about June 12, 2008. Attached as Exhibit 8 is a copy of the permit application.

18. Of note, the application calls the Container Building, an "interim utility building as a storage and weather shelter for sandblasting and performing service work on vessels (work normally done outside)." The application does not reference that it would be used

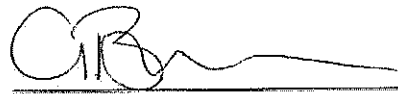
to house the Vessel or any other ships or that Derecktor intends to use the Container Building as a location for new construction.

19. Mr. Nelson relayed that the Department had not yet issued any building permits to Derecktor, rather it provided Derecktor with a correction list of items Derecktor needed to address before it would issue the building permit. Mr. Nelson provided me with a copy of the Department's correction list which is attached hereto as Exhibit 9.

20. In our conversation, Mr. Nelson confirmed that the Container Building does not have the required building permits nor does it have a Certificate of Occupancy.

This Declaration is made under the penalties of perjury of the United States of America.

Signed this 14th day of July, 2008.

  
Gavin Bladen

# 5468173\_v3

# **EXHIBIT 1**

**GAVIN BLADEN**

21 Ann Street APT B55  
South Norwalk  
CT 06854  
Tel- 203 451 3009

**Personal**

Date of Birth: 1<sup>st</sup> March 1972  
Nationality: British  
Marital Status: Single

**Education**

Bingley Grammar school 1985-1991  
7 GCSE's-English, Mathematics, History, Geography, Biology, Chemistry, Design and Communication.  
4 A Levels-Economics, History, Geography, General Studies.

**Qualifications**

RYA Ocean Yachtmaster  
PADI Dive Instructor  
STCW95- Fire prevention and Fire Fighting  
STCW95- Personal Survival Techniques  
STCW95- Elementary First Aid  
STCW95- Personal Safety and Social Responsibility  
Proficiency in Survival Craft and Rescue Boats  
STCW A-VI /3 Advanced Fire Fighting  
STCW A-VI /4-1 Proficiency in Medical First Aid  
OOW Navigation and Radar  
OOW General Ship Knowledge  
GMDSS GOC  
MCA Master Seamanship  
MCA Master First Aid  
MCA Master Stability  
MCA Master Business and Law  
MCA Master Navigation  
MCA Chief Mate 3000gt

**Employment**

*July 2004- To Present*

Captain/Owners Representative. Project Gemini, Sailing Catamaran 44.2m  
Developed initial concept idea with the owner. Drawing on past experience gave guidance to the naval architects and interior designers, and ensured that the owners wishes are always followed.

*June 2000-July 2004*

Captain/Dive Instructor. S/V Double Feature - Lagoon 570  
Double Feature is one of the most successful charter yachts based in the Caribbean. From construction in France, and over twenty five thousand nautical miles under her keels she has been maintained and managed to the highest standard.

*October 1998-June 2000*

Captain/Dive Instructor. S/V Pesket and Eol - Outremer 55  
Involved with promoting and developing Pesket into a popular charter boat, sailing throughout the Caribbean offering full dive tuition for up to six guests.

*June 1996-September 1998*

Chief Dive Instructor/ Relief Captain. S/V Cuan Law-105ft Trimaran.



Catering for twenty guests as a live aboard dive boat, Cuan Law also offered regular chartering activities. Responsible for co-ordinating crew to ensure the guests needs were accommodated, as well as the exterior appearance of the boat. Since February 1998 worked as relief captain .

*December 1995- May 1996*

Dive Instructor/ Crew. S/V Shiwara -65ft Monohull  
Involved in all aspects of sailing and maintenance of a busy charter yacht.

*May 1992-May 1993*

Travelled extensively around Australia, during which time the following positions were held,  
Divemaster-Pro Dive-Whitsundays  
Divemaster-Reef Enterprise, Queensland  
Deckhand-Cairns Dive Center, Queensland

**Interests**

Windsurfing, Tennis, Skiing, currently learning to Kiteboard

**References**

Julie Thompson  
Business Manager  
Valhalla Motion Pictures  
8530 Wilshire Boulevard  
Suite 400  
Beverly Hills, CA 90211  
1-310-360-8533  
jt@valhallapix.com

Marianne Doux-Laplace  
Base Manager  
Catamaran Charters  
Po Box 281, Road Town  
Tortola  
British Virgin Islands  
1-284-494-6661  
mdldp@surfbvi.com

# **EXHIBIT 2**

**VESSEL CONSTRUCTION AGREEMENT**

Between

***DERECKTOR SHIPYARDS CONN., LLC***

and

***GEMINI II LTD.***

**FOR THE CONSTRUCTION OF A**

**145' SAILING CATAMARAN**

INITIALS OF OWNER  
INITIALS OF BUILDER

*[Handwritten initials]*  
*[Handwritten initials]*

INITIALS OF OWNER  
 06/27/08

1

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EXHIBIT B:	Plans - Drawings List (both Vessel and Interior)
EXHIBIT C:	Request for Change Order form
EXHIBIT D:	Protocol of Delivery and Acceptance
EXHIBIT E:	Bureau Veritas Classification Standards
EXHIBIT F:	MCA Compliance Standards

EXHIBIT G:	Copies of Builder's Risks and other Insurance Policies and Endorsements
EXHIBIT H:	Construction Schedule
EXHIBIT I:	Form of Milestone Certificate
EXHIBIT J:	Form of Escrow Agreement for the Warranty Guaranteed Account
EXHIBIT K:	Cost Allowance Items and total Cost Allowance
EXHIBIT L:	Delivery Schedule for Owner Supplied Items
EXHIBIT M:	Equipment List
EXHIBIT N:	Builder's Subcontractor Policy
EXHIBIT O:	Items to be Delivered by Builder at Delivery of Vessel
EXHIBIT P:	GEMINI Contract Price Summary (Final)
EXHIBIT Q:	Naval Architect's "Weight Estimate: GEMINI" (V.03)

## VESSEL CONSTRUCTION AGREEMENT

This Agreement is made as of the 30th day of June, 2005,

by and between:

**Genini II LTD.**, a Cayman Islands exempted company, whose registered address is Cayman Business Park, A7, P.O. Box 10300 APO, Grand Cayman, Cayman Islands and its assigns (hereinafter referred to as the "Owner")

and:

**Derecktor Shipyards Corp., LLC**, a Delaware limited liability company, whose address is 837 Seaview Avenue, Bridgeport, Connecticut 06607 (hereinafter referred to as the "Builder").

### WITNESSETH:

#### RECITALS:

**WHEREAS**, the Owner wishes to have custom built for it, to the highest standards, a 145' luxury sailing catamaran for both private use and for chartering (i.e., commercial use) and suitable for year round, worldwide cruising, all seas, with trans-oceanic capability, all as more specifically described herein and in the Plans and Specifications (the "Vessel");

**WHEREAS**, the Builder has submitted a proposal to the Owner for construction and delivery of the Vessel; and

**WHEREAS**, after discussions and negotiations in respect of the Builder's proposal, the Owner and the Builder wish to enter into an agreement providing for the construction and delivery of the Vessel;

**NOW THEREFORE**, the Owner and Builder agree that the Builder shall build, construct, fit, equip, and complete the Vessel at its shipyard located at Bridgeport, Connecticut, using the best yacht building practices, best workmanship and finest quality materials, and shall subsequently launch, test, classify, deliver and warranty the Vessel to the Owner, and the Owner shall pay for and accept and take possession of the Vessel, all upon the terms and conditions set forth in this Agreement.

#### ARTICLE 1. PURPOSE

This Agreement sets out the terms and conditions on which the Builder will construct and deliver the Vessel to the Owner, and the conditions on which the Owner will pay for, hold title in, and ultimately accept delivery of the Vessel.

INITIALS OF OWNER  
INITIALS OF BUILDER

*QW*  
*EDD*

## ARTICLE 2. DEFINITIONS

In this Agreement, the following defined terms shall have the meanings assigned to them unless the context otherwise requires:

- a) "Acceptance" means acceptance of the Vessel by the Owner in accordance with ARTICLE 16.
- b) "Adjusted Guaranteed Weight" has the meaning ascribed thereto in Section 19.2 a)(i).
- c) "Agreement" means this Vessel Construction Agreement, together with the Plans and Specifications, the Standards, and all other exhibits or attachments hereto, all as amended in writing from time to time.
- d) "Base Guaranteed Weight" has the meaning ascribed thereto in Section 19.2 a)(i).
- e) "Builder's Bank" means the Bank of New York/County Region, 535 East Boston Post Road, Manhasset, New York 10543.
- f) "Builder's Shipyard" means the Builder's shipyard in Bridgeport, Connecticut.
- g) "Business Day" means a calendar day other than a Saturday, Sunday or public holiday in the state of Connecticut.
- h) "Change Order" means a variation from the "Plans and Specifications" agreed in writing and signed by the Builder and the Owner in strict compliance with the provisions of ARTICLE 11.
- i) "Classification Society" means Bureau Veritas.
- j) "Classification Surveyor" means a surveyor appointed by Bureau Veritas pursuant to ARTICLE 7.
- k) "Commencement Date" means the date on which all the events specified in Section 13.1 have been fulfilled.
- l) "Construction Schedule" means the mutually acceptable GANTT chart or equivalent format production schedule for the construction of the Vessel set out in Exhibit H hereto, as it may be modified by mutual written agreement from time to time.
- m) "Construction" or "Construct" means the engineering, fabrication, assembly, erection, testing, trials and delivery of the Vessel in conformance with this Agreement.
- n) "Contract Price" means the fixed price of Twenty-seven Million Ninety-four Thousand Four Hundred Ninety-eight and no/100 Dollars (\$27,094,498.00), as stated in



ARTICLE 10, inclusive of the Cost Allowance as provided in Exhibit K, and inclusive of all fees, charges, taxes (other than sales tax), levies and other duties as described in ARTICLE 23 a) that may be imposed on or with respect to the Vessel and her components prior to acceptance of the Vessel by the Owner for which the Builder is responsible, and inclusive of all costs of insurance as provided in ARTICLE 22, but subject to adjustment for any "Change Orders" made strictly in accordance with ARTICLE 11.

o) "Cost Allowance" means the amount of \$5,884,422.00, being the sum of the aggregate of all of the Cost Allowance Items identified on Exhibit K.

p) "Cost Allowance Items" means the various items or work identified on Exhibit K, the estimated values of which in the aggregate make up the Cost Allowance.

q) "Default Rate" means the interest rate calculated on a daily basis at the aggregate rate per annum of the "prime rate", as announced from time to time by Bank of America, N.A., plus 4 %, and compounded annually.

r) "Delivery Date" means November <sup>30</sup> 21, 2007, or such earlier or later date as may be provided in a Change Order, or as may be calculated in accordance with any provisions of this Agreement expressly providing for extending or shortening such date, or such other date as the parties may agree in writing. CMB

s) "Delivery Payment" has the meaning ascribed thereto in Section 12.2 a)

t) "Deposit" means the initial amount equal to five percent (5%) of the initial Contract Price as provided in Section 12.2 a)(i).

u) "Effective Date" means the date as determined in accordance with ARTICLE 30.

v) "Equipment" means all items, including without limitation equipment, machinery, electronics, parts and materials used or intended to be used in the Construction of the Vessel, but excluding "Owner Supplied Items."

w) "Equipment List" means the equipment list signed by the Owner and Builder and attached hereto as Exhibit "M", and any written amendments or addenda thereto, and any further equipment lists as may be agreed in writing from time to time between the Owner and the Builder, all of which form an integral part of this Agreement.

x) "Escrow Agent" means Holland & Knight LLP or any successor escrow agent appointed pursuant to the terms of the Escrow Agreement.

y) "Escrow Agreement" means the Escrow Agreement in the form of Exhibit J providing for the establishment and operation of the Warranty Guarantee Account.

z) "Flag State" means the Cayman Islands, which is designated by Owner as the State where the Vessel will be registered upon completion and delivery.

aa) "Force Majeure" means any event or circumstance beyond the control of the party asserting it which renders such party unable to perform any of its obligations under this Agreement including, without limitation, so-called "acts of God", fire, flood, explosion, lightning, acts, orders of any governmental authority, agency, or department, strikes, lockouts or other industrial disturbances, acts of terrorists or other public enemies, riots or civil commotion, war, or blockade.

bb) "Insured Amount" has the meaning ascribed thereto in ARTICLE 22 e).

cc) "Interior Designer" means the interior designer/architect engaged by the Owner as contemplated by Section 6.2, or any replacement or substitute engaged by the Owner.

dd) "Invoice" means a Builder supplied document requesting payment and detailing the justification for the requested payment.

ee) "Lessor" means The Bridgeport Port Authority.

ff) "Manufacturers Warranties" has the meaning ascribed thereto in Section 19.1 g).

gg) "Marine Engineer" means the marine engineer engaged by the Owner as contemplated by Section 6.3, or any replacement or substitute engaged by the Owner.

hh) "Measured Weight" has the meaning ascribed therein in Section 19.2 a)(i).

ii) "Milestone Certificate" means a certificate in the form of Exhibit I hereto, or in such other form as may be agreed by the Builder and the Owner, to be signed prior to the payment of each Milestone Payment (other than the Deposit) by each of (i) the Builder or the Project Coordinator and (ii) the Owner or the Owner's Representative, and at least every other Milestone Certificate also to be signed by both the Marine Engineer and the Classification Surveyor, as provided in ARTICLE 12.

jj) "Milestone Payment(s)" has the meaning ascribed thereto in Section 12.2 a).

kk) "Naval Architect" means the naval architect engaged by the Owner as contemplated by Section 6.1, or any replacement or substitute engaged by the Owner.

ll) "Owner's Representative" means the person appointed by the Owner pursuant to ARTICLE 4 a), or any replacement or substitute engaged by the Owner.

mm) "Owner Supplied Items" means any items identified in Section 11 or Section 16.02 of the Specifications, or elsewhere in the Specifications, that are specifically to be purchased or furnished by the Owner for inclusion in the Vessel.

mi) "Payment Location" means the account listed below or such other account or place as the Builder may designate in writing to the Owner from time to time hereunder:

The Bank of New York/County Region  
335 East Boston Post Road  
Mamaroneck, New York 10543  
ABA #021-0000-18  
Account Name: Denecktor Shipyards Const., LLC  
Account No. 6701-990-887

nn) "Plans" means the plans and drawings signed by the Owner and the Builder and attached hereto as Exhibit B, and any written amendments or addenda thereto, the plans and drawings provided by the Interior Designer, when approved by the Owner and Builder, and any further plans or drawings as may be agreed in writing from time to time between the Owner and the Builder, all of which form an integral part of this Agreement.

pp) "Project Coordinator" means the person appointed by the Builder pursuant to ARTICLE 5.

qq) "Regulatory Body" means any governmental department or agency of the Flag State, or Classification Society or other authority which issues, interprets or enforces the laws, rules and regulations that will govern the Construction and classification of the Vessel as set forth in the Specifications and in ARTICLE 7.

rr) "Sea Trials" means the dock trials and sea trials to be performed as provided in ARTICLE 16 and in the Specifications.

ss) "Shipyard Lease" means the Builder's lease dated September 11, 2000 with the Lessor for the premises on which the Builder's Shipyard is located.

tt) "Specifications" means the specifications signed by the Owner and the Builder and attached hereto as Exhibit A, including the interior specifications developed by the Interior Designer and/or by Jan Grooves, as reasonably approved by the Builder, and any written amendments or addenda to any of the foregoing, and any further specifications as may be agreed in writing from time to time between the Owner and the Builder, all of which form an integral part of this Agreement.

uu) "Standards" means and includes all of the following:

- (i) the Specifications and any addenda (Exhibit A),
- (ii) the Plans and any addenda (Exhibit B),
- (iii) the Equipment List and any addenda (Exhibit M),
- (iv) the Bureau Veritas ("BV") Classification Standards and Rules applicable to the Vessel for classification with the notations specified in ARTICLE 7 b)

and/or in the Plans and Specifications and any amendments and/or addenda (Exhibit E),

- (v) the MCA Large Commercial Yacht Code ("Y") (Exhibit F),
- (vi) all applicable laws, regulations and rules of the Flag State,
- (vii) all applicable laws, regulations and rules of the United States that apply to foreign flag yachts operating in U.S. waters, and
- (viii) National Fire Protection Association, Standard 302 for Pleasure and Commercial Motor Craft, 2004 Edition or latest edition thereafter (but only to the extent not in conflict with the other standards identified above).

vv) "Subcontractor" means any person other than employees, engaged by the Builder to execute any part of the work under this Agreement on behalf of the Builder.

ww) "Supplier" means any person responsible for the supply, manufacture, construction, installation or delivery to the Builder of any of the materials, machinery, equipment or other components of the Vessel.

xx) "Warranty Guarantee Account" means the interest bearing escrow account established and operated by the Escrow Agent pursuant to the terms of the Escrow Agreement for the sole purpose of administering the funds from the agreed 2% holdback from each Milestone Payment made by Owner until the amount in such account reaches Four Hundred Thousand Dollars (\$400,000.00), all as provided in Section 12.1.

yy) "Warranty Period" means the eighteen (18) month-period following the date the Protocol of Delivery and Acceptance is signed by the Owner.

### ARTICLE 3. SCOPE OF THE WORKS

a) Builder shall Construct the Vessel in accordance with this Agreement, as modified by any Change Orders, and in compliance with the Standards, within the Construction Schedule, and to the full classification of the Classification Society as specified in ARTICLE 7. The Vessel shall be Constructed in a manner consistent with the standards, practices and workmanship of a first class custom builder of luxury yachts. The Builder hereby designates the Vessel as the Builder's ID Number 85135.

b) Unless otherwise specified in the Specifications, Builder shall be responsible for (i) purchasing all Equipment, and (ii) providing all labor or arranging Subcontractors to provide such labor, each as is necessary for the Construction of the Vessel.

c) Construction of the Vessel includes the engineering, fabrication, assembly, erection, testing, trials and delivery of the Vessel in conformance with this Agreement, and includes all certificates described herein or in the Specifications as well as other certificates, if any, required by the Flag State, the Classification Society, or any other Regulatory Body. All elements of such Construction shall be accomplished by the

*[Handwritten initials]*  
*[Handwritten initials]*



Builder at no additional cost to Owner or Owner's Representative, except for Change Orders and/or as otherwise provided in this Agreement.

d) It is the intent of this Agreement that the Builder is to Construct, furnish and outfit the Vessel so that it will be ready for its intended service, pursuant to the Plans and Specifications. All items to be furnished by the Owner are specifically identified in Section 11 and Section 16.02 of the Specifications as Owner Supplied Items. Anything necessary for the proper construction and functional operation of the Vessel that is not specifically identified as Owner Supplied Items in Section 11 and Section 16.02 of the Specifications is the responsibility of the Builder. The Builder is also responsible for the installation of Owner Supplied Items, including all necessary foundation, connections, and related equipment, all as provided in the Specifications.

e) The Owner shall obtain and arrange for delivery to the Builder's premises all of the Owner Supplied Items specified in the Specifications in accordance with the schedule attached hereto as Exhibit L, for Builder to install in the Vessel. The Builder shall notify the Owner thirty (30) days in advance of the Builder's need for the Owner Supplied Items, which shall be approximately on the dates indicated on Exhibit L. The Owner shall also timely provide to the Builder any information and documentation necessary for the handling, storing and installation of Owner Supplied Items. Prior to the delivery of Owner Supplied Items to the Builder's Shipyard, they shall be entirely at the risk of the Owner. Upon the delivery of Owner Supplied Items to the Builder's premises, the Builder may carry out such inspections and checks as it would for its own received materials and equipment. The Builder shall be entitled to reject such of the Owner Supplied Items as the Builder finds to be damaged or defective or not suitable for installation in the Vessel. The Builder shall promptly notify the Owner's Representative of any such non-acceptance and give reasonable details of the reasons for such non-acceptance. The Owner shall arrange for the prompt replacement or repair of any such damaged, defective, or unsuitable items. The Builder shall, at its own risk and expense, receive, inspect, and check as to conformance with packing lists and bills of lading all Owner Supplied Items upon their arrival at the Builder's premises, and shall immediately mark them with the Builder's ID Number 85135 and properly and securely handle, store, protect and insure them, with the same high degree of care and diligence as if they had been purchased by the Builder. The Builder shall store all Owner Supplied Items in secure and appropriately climate controlled storage facilities, separated and segregated from the Builder's own inventory and equipment. The Builder shall be responsible for any damage to or loss of Owner Supplied Items after receipt at the Builder's premises, no matter how such damage or loss may arise, unless caused directly by the Owner's Representative or employees, or by subcontractors engaged by the Owner.

f) The installation of, or preparation for installation of, the Owner Supplied Items is included in the scope of the works for which the Builder is responsible to the extent so stated in the Specifications. To the extent, if any, that the Specifications do not provide for the installation by the Builder of certain of the Owner Supplied Items, the

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installation may be carried out by the Owner or its subcontractors, at the expense of the Owner. Alternatively, if the Builder and the Owner so agree, any of such items may be installed by the Builder with such installation being handled as a Change Order pursuant to and in compliance with the provisions of ARTICLE 11. If Owner Supplied Items are being installed by the Owner or its employees or subcontractors, the Builder shall provide them access to the Vessel and to the premises of the Builder and of any Subcontractors of the Builder, to the extent necessary in connection with the efficient performance of such work and installations. While carrying out such installations, the Owner's Representative and Owner's employees or subcontractors shall not unnecessarily obstruct the Builder or its Subcontractors in their continuing construction of the Vessel.

g) The Builder shall prominently mark the Vessel and all Equipment and Owner Supplied Items with the Builder's ID Number 85135 or other clear and definitive markings identifying them to the Vessel immediately upon their arrival at the Builder's Shipyard, or in the case of items that will be taken from the Builder's stock or inventory, immediately upon their being identified as intended or designated for the Vessel.

#### ARTICLE 4. OWNER'S REPRESENTATIVE

a) On or before the Commencement Date the Owner shall notify the Builder in writing of the name of the Owner's Representative. The Owner shall similarly notify the Builder promptly of any replacement of the Owner's Representative.

b) If the Owner's Representative (or any replacement appointed pursuant to this Section) is unable or unwilling to act, or shall be removed from this position by the Owner at any time, the Owner shall as soon as reasonably practicable notify the Builder of the name of the replacement appointed by the Owner.

c) The Owner's Representative shall carry out the duties set forth herein, and may exercise the authority specified in or necessarily to be implied from, this Agreement.

d) Except as expressly stated in the Agreement, the Owner's Representative shall have no authority to amend the Agreement, or to agree to any single Change Order costing more than \$5,000.00 or total Change Orders costing more than \$250,000.00 in the aggregate. For approval of proposed change orders having a cost impact in excess of these limits, the signature of the Owner is required.

e) The Builder shall provide, at its expense and cost, suitable office space and office facilities at the Builder's Shipyard for the Owner's Representative as may be reasonably necessary to enable him effectively to carry out his work. This includes the supply of secure office space, office furniture, availability of meeting rooms, telephone and telefax lines, and high speed internet access. Communication expenses of the Owner's Representative shall be charged to the Owner's account.

f) The Owner's Representative will not give instructions to any Subcontractor, agent or employee of the Builder except the Project Coordinator.

g) All legal permissions and acceptances required for the Owner's Representative's stay or visits in the United States of America as well as all insurances required (e.g.: third party, accident & health) during work on or off the Builder's premises shall be the Owner's responsibility.

h) The Owner's Representative will be the direct contact of the Project Coordinator for performance of this Agreement.

#### ARTICLE 5. PROJECT COORDINATOR

a) On or before the Commencement Date the Builder shall notify the Owner in writing of the name of the Project Coordinator. The Builder shall similarly notify the Owner of any replacement of the Project Coordinator.

b) The Project Coordinator will be responsible for overseeing the Construction of the Vessel within the conditions of this Agreement.

c) Except as expressly stated in this Agreement, the Project Coordinator shall have no authority to amend this Agreement, or to agree to any single Change Order costing more than \$10,000.00 or total Change Orders costing more than \$500,000.00 in the aggregate. For approval of proposed Change Orders having a cost impact in excess of these limits, the signature of the Builder is required. The Project Coordinator will be charged with presenting proposed changes to the proper authority of Builder for approval when asked by the Owner or Owner's Representative.

d) The Project Coordinator will be the direct contact of the Owner's Representative for performance of this Agreement.

e) The Project Coordinator shall receive on behalf of the Builder all consents, approvals, orders, instructions and information given by the Owner's Representative.

#### ARTICLE 6. NAVAL ARCHITECT; INTERIOR DESIGNER; MARINE ENGINEER

##### Section 6.1 - Naval Architect

a) The Naval Architect engaged by the Owner is Van Peteghere - Lauriot Prévost SARI. The Owner is responsible for paying the Naval Architect's charges.

b) The Naval Architect will provide concepts, geometry, functionality and aesthetics of the Vessel and related items, but will not provide construction drawings or detailed drawings, except as indicated to the contrary in the Plans and/or Specifications. It will be the responsibility of the Builder to prepare all other final construction drawings or detailed drawings, subject to approval by the Owner or Owner's Representative.



c) The Builder may communicate directly with the Naval Architect in matters relating to the plans and drawings provided by the Naval Architect and the Owner shall instruct the Naval Architect to work in cooperation with the Builder in that regard. The Owner's Representative shall be copied on all communications between Builder and the Naval Architect. The Builder shall have the right not to accept any concepts, geometry, functionality and aesthetics of the Vessel proposed by the Naval Architect that would make the Vessel unsafe, or that would not comply with the Standards.

#### Section 6.2 . Interior Designer

a) The Interior Designer engaged by the Owner is Michael Leach Design Limited. The Owner is responsible for paying the Interior Designer's charges.

b) The Interior Designer will be responsible for providing plan views, elevations, ceiling plans, materials specifications, lighting details including fixtures, fabric details, and furniture design details for all the Owner, guest, crew, and public spaces for the Vessel, but will not provide construction drawings or detailed drawings, except as indicated to the contrary in the Plans and/or Specifications. The Builder shall provide the Interior Designer with arrangements and sections of the Vessel defining the space available for the interior furnishings. The Interior Designer shall not be responsible for providing any details for the lazarette, engine room, and auxiliary machinery spaces of the Vessel. It will be the responsibility of the Builder to prepare all other final construction drawings or detailed drawings, subject to approval by the Owner or Owner's Representative.

c) The Builder may communicate directly with the Interior Designer in matters relating to the interior plans and drawings, and the Owner shall instruct the Interior Designer to work in cooperation with the Builder in that regard. The Owner's Representative shall be copied on all communications between Builder and the Interior Designer. The parties recognize that development of the interior plans and drawings to the Owner's satisfaction will be a cooperative effort requiring the exercise of "good faith" by all involved. The Builder shall have the right not to accept any concepts or ideas as proposed in the Interior Designer's interior plans and drawings that would make the Vessel unsafe, or that would not comply with the Standards.

#### Section 6.3 . Marine Engineer

a) The Marine Engineer engaged by the Owner is Taylor Marine Services, Inc. The Owner is responsible for paying the Marine Engineer's charges.

b) The Marine Engineer will provide schematic concepts and technical documentation for certain engineering systems for the Vessel, but will not provide class approved drawings, construction drawings or detailed drawings. It will be the responsibility of the Builder to prepare the final construction drawings or detailed drawings, subject to approval by the Owner or Owner's Representative.



d) The Builder may communicate directly with the Marine Engineer in matters relating to the engineering systems, and the Owner shall instruct the Marine Engineer to work in cooperation with the Builder in that regard. The Owner's Representative shall be copied on all communications between Builder and the Marine Engineer. The Builder shall have the right not to accept any schematic concepts and technical documentation for engineering systems as proposed by the Marine Engineer that would make the Vessel unsafe, or that would not comply with the Standards.

#### ARTICLE 7. CLASSIFICATION AND STANDARDS

a) The Builder is to be responsible for constructing the Vessel to the Standards. Notwithstanding anything to the contrary in this Agreement or in the Plans and Specifications, unless (but only to the extent) prevented by a Change Order approved in accordance with ARTICLE 11, it shall be the duty of the Builder to construct, complete and deliver the Vessel in compliance with the Standards.

b) The Vessel shall be subject to full plan review by, and shall be constructed under full survey by the Classification Society (as to both hull and machinery) in accordance with its rules and regulations for the classification designations and/or symbols set forth below (and the Vessel shall be so classed):

<u>Class Symbol:</u>	<u>Construction Markers:</u>	<u>Service Notation:</u>	<u>Other:</u>
I	⊠ (Maltese Cross) HULL • (Bullet) MACH.	YACHT	(E) Equipment

c) Furthermore the Vessel shall be constructed, equipped and certified to comply with the laws, rules and regulations of the Flag State and of the United States that apply to foreign flag yachts operating in U.S. waters, and with international conventions and regulations in force in United States waters, to the extent applicable to vessels of the size and type of the Vessel, and that carry not more than 12 passengers on international voyages, including, without limitation:

(i) Convention on the International Regulations for Preventing Collisions at Sea, 1972, as amended;

(ii) International Convention for the Prevention of Pollution from Ships, 1973 ("MARPOL"), as subsequently amended/superseded by the 1978 MARPOL Protocol ("MARPOL 73/78"), and all applicable annexes and amendments, and statutory modifications or re-enactments thereof for the time being in force in the United States;

(iii) International Convention for the Safety of Life at Sea, 1974, and 1978 Protocol, 1988 Protocol, and all applicable annexes and amendments (to the extent applicable to the Vessel), including, without limitation, the amendments

regarding Radio Communications for the Global Maritime Distress and Safety Systems ("GMDSS");

(iv) International Convention on Tonnage Measurement of Ships, 1969, as amended, and Suez Canal and Panama Canal tonnage regulations and requirements;

(v) International Load Line Convention, 1966, and 1988 Protocol and all applicable annexes and amendments (to the extent applicable to the Vessel);

(vi) International Telecommunications Convention, 1982 and annexes and amendments (to the extent applicable to the Vessel);

(vii) Any other conventions or regulations as may be particularly stated in the Specifications.

d) If after the Effective Date of this Agreement any modifications are made to the laws, rules and regulations applicable to the Vessel or their interpretation or application and such modifications are compulsory for the Vessel, the Builder shall present to the Owner's Representative a proposed Change Order for the required modifications.

e) The decisions of a Regulatory Body shall be final and binding on both contracting parties as to the Vessel's compliance or non-compliance with the laws, rules and regulations observance of which is controlled by the said Regulatory Body.

f) The Builder alone is to be responsible for the construction of the Vessel and the quality of workmanship and materials other than Owner Supplied Items. The fact that drawings have been shown to the Owner or approved on behalf of the Owner by the Owner's Representative will not relieve the Builder in any way from ARTICLE 7 a). Anything not mentioned in the Specifications, Exhibit A, but which is as of the Effective Date of this Agreement required by the Classification Society and/or the Flag State for the construction or functional operation of the Vessel is to be supplied and installed at the Builder's expense.

g) At the Builder's request, the Classification Society shall nominate a representative (the "Classification Surveyor") to inspect the Vessel during Construction.

h) The Builder shall pay all fees and charges incidental to the inspection, classification and compliance with the Flag State's and the Classification Society's rules and regulations, and with the requirements set forth in the Standards in relation to the Construction of the Vessel, including fees and charges for plan approval, certifications, issuance of certificates, or any related costs. Any and all fees that may be charged by the Classification Society with respect to its verification and execution of any and all Milestone Certificates shall be borne by the Builder.

i) The Builder shall arrange for all materials and equipment used and to be used in the construction of the Vessel and all construction work to be made available for inspection and testing, as required, by the Classification Society and the Owner's Representative. The Builder shall make all necessary facilities available so that those inspections and tests can be carried out by the Classification Society and the Owner's Representative safely and conveniently. One original and one copy of all test certificates issued by the Classification Society or by any manufacturers shall be provided to the Owner's Representative.

j) The Builder shall pay for testing and materials consumed during testing mentioned in this ARTICLE or in ARTICLE 16.

## ARTICLE 8. CONSTRUCTION

### Section 8.1 . Location

a) The Builder shall Construct the Vessel at the Builder's Shipyard. Prior to delivery, the Builder shall not permit the Vessel to be removed from that Shipyard except:

- (i) with the prior consent of the Owner, or
- (ii) for purposes of the Sea Trials; or
- (iii) in case of a Force Majeure event when it is necessary for the safety or protection of the Vessel; or
- (iv) in the event of the valid termination of this Agreement.

### Section 8.2 . Subcontractors

a) The Builder may appoint Subcontractors as it deems fit for certain specialized work.

b) The Builder, however, remains responsible for any work performed or materials supplied by its Subcontractors to the same extent as if the Builder had performed the work or supplied the materials itself.

c) Unless disputed in good faith and by appropriate commercial or legal actions initiated before the due date, the Builder shall pay when due all invoices, charges or claims due for labor, services, materials, Equipment, and supplies furnished for the work done under this Agreement by any and all persons and entities for which it is Builder's obligation to pay under this Agreement, including Builder's Subcontractors. Builder agrees to protect, defend, indemnify, and hold harmless the Vessel and the Owner from any and all liens, demands or claims resulting from or arising out of any work performed or materials, Equipment, and supplies furnished under this Agreement.

by Builder or by Builder's Subcontractors or Vendors or by any and all other persons and entities for which it is Builder's obligation to pay under this Agreement.

**Section 2.3. Control Of Construction; Access by Owner or Owner's Representative**

a) Until acceptance of the Vessel by the Owner, the Owner shall have the right to have the Vessel and all engines, machinery, outfit, equipment and materials intended therefor, and all work being done thereon, inspected during the construction by the Owner and/or Owner's Representative, the Naval Architect, the Interior Designer, and/or the Marine Engineer (or by other inspectors designated by the Classification Society or the Flag State) for the purpose of determining that the Vessel is being constructed in accordance with the terms of this Agreement. The Builder shall grant such persons free access during normal working hours to the Vessel and such other items at the Builder's Shipyard and workshops and storage facilities or wherever the same may be located or wherever work is being done. The Builder shall provide such inspectors with reasonable working facilities, including office accommodation and telephone and telefax facilities and high speed internet access.

b) The Builder shall use its best efforts to procure that, with reasonable prior notice, the Owner's Representative shall have access to the premises of the Subcontractors of the Builder who are doing work in connection with the construction of the Vessel.

c) While carrying out his inspections under this Agreement, the Owner's Representative shall not obstruct the Builder or its Subcontractors in the construction of the Vessel, nor shall he direct or communicate to any employee of Builder or any Subcontractor, except the Project Coordinator, to perform any work hereunder.

d) The Owner's Representative and subcontractors, if any, may exercise their functions during the normal business hours of the Builder or as otherwise agreed with Builder.

e) The Owner's Representative and subcontractors, if any, shall be obligated to abide by all reasonable and applicable published company rules and regulations when present in the premises of the Builder and/or its Subcontractors. A copy of Builder's Subcontractor Policy is attached hereto as Exhibit N.

f) The Owner's Representative may consult with the Project Coordinator in all matters relating to the construction of the Vessel as frequently as the Owner's Representative considers necessary but no less than once a week or a day to be agreed.

g) The Builder shall use its best efforts to maintain an open and cooperative communication pathway among the Builder, Owner's Representative, and any Subcontractors on all issues involving such Subcontractors.



**Section 8.4 . Unsatisfactory Work and Materials**

- a) During the Construction of the Vessel the Owner's Representative shall have power to demand in writing:
- (i) the removal from the Vessel or from the construction site, within such time or times specified in the instruction, of any Equipment or materials which in his reasonable opinion do not comply with the Agreement;
  - (ii) the replacement of such Equipment or materials with others that in the reasonable opinion of the Owner's Representative do so comply; and
  - (iii) the removal and proper replacement of any work which, in respect of materials or workmanship or design or engineering supplied by the Builder or for which the Builder is responsible, does not in the reasonable opinion of the Owner's Representative comply with the Agreement.
- b) Such instruction given by the Owner's Representative must clearly state the basis for such removal, including the relevant provision of this Agreement.
- c) On receipt of such instruction, the Project Coordinator shall either:
- (i) comply with the instruction and remedy such work under materials and/or design and/or engineering; or
  - (ii) contest the instruction received from the Owner's Representative by sending a written notice to the Owner's Representative explaining the reasons for his disagreement with the instruction.
- d) If the Project Coordinator contests the instruction received from the Owner's Representative, the Owner's Representative and the Project Coordinator shall hold an official meeting as soon as practicable, and in any event within five (5) Business Days after the notice was delivered, to solve the problem.
- e) If during the meeting the Owner's Representative and the Project Coordinator agree on the matter, they shall record the agreement in the minutes of the meeting signed by both, and the Project Coordinator shall promptly implement the agreement.
- f) If during the meeting the Owner's Representative and the Project Coordinator are unable to agree on the matter it shall be referred for resolution in accordance with ARTICLE 27.

**Section 8.5 . Construction Schedule**

- a) Attached hereto as Exhibit H is the Construction Schedule prepared by the Builder setting out in detail the timetable for delivery by the Naval Architect, Interior Designer, and Marine Engineers of those deliverables required by the Builder so that the

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Builder can maintain its schedule, and the timetable for the construction and completion of each of the major elements, components and systems of the Vessel, and for the ordering of and delivery to the Builder of the main materials, engines, machinery, equipment and other components of the Vessel, including the Owner Supplied Items, provided that the said Exhibit II may be amended from time to time in accordance with the terms of this Agreement. Delay in providing to the Builder the required deliverables or Owner Supplied Items may entitle the Builder to an extension of the Delivery Date, but only as and to the extent provided in Section 19.2.

b) The Construction Schedule for the delivery of the Vessel to the Owner by the Delivery Date assumes that the Builder employs commercially reasonable construction practices to comply with the Plans and Specifications using a skilled labor force working a standard 40 hour work week. The Owner may request, and the Builder shall reasonably comply with such request, at a mutually agreed price, to shorten the Construction Schedule and accelerate the Delivery Date by employing overtime and such other practices as will accelerate the delivery of the Vessel.

#### **Section 8.6 . Construction Weight Monitoring and Control**

Builder acknowledges that weight control is an essential component of the Vessel. Therefore, in addition to Builders warranty of the Adjusted Guaranteed Weight pursuant to Section 19.2 a)(1), Builder shall institute a weight control program and use its best efforts to evaluate, engineer, recommend and monitor all aspects of the Vessel weight during Construction so that the Measured Weight of the Vessel at delivery will not exceed the Adjusted Guaranteed Weight determined in accordance with Section 19.2 a)(3).

### **ARTICLE 9. APPROVAL OF PLANS AND DRAWINGS, AND EQUIPMENT**

#### **Section 9.1 . Plans and Drawings**

a) The Project Coordinator shall submit to the Owner's Representative for review based on the Plans and Specifications copies of all construction plans and detailed drawings necessary for the construction or Construction of the Vessel.

b) The Owner's Representative shall provide his comments in writing on such plans and drawings as soon as practicable, but in any event within ten (10) calendar days of receipt.

c) If the copy of the plans and drawings are returned to the Project Coordinator with comments by the Owner's Representative justified under the terms of the Agreement and if those comments do not constitute a Change Order, then the Project Coordinator shall resubmit the modified construction plans and detailed drawings incorporating the comments of the Owner's Representative that do not constitute Change Orders within ten (10) calendar days after receipt of comments from the Owner's Representative. In such case, the Owner's Representative shall provide his

written approval or comments as soon as practicable, and in any event within five (5) Business Days of his receipt of the modified plans or drawings.

d) Once construction plans and detailed drawings have been reviewed by the Owner's Representative they must be submitted to and approved by the Classification Society before orders are placed or work is commenced that relates to such plans and drawings. If the Builder proceeds with the purchase of materials or the performance of work prior to approval by the Classification Society, it does so at its own risk and expense.

e) The Owner is responsible for the fees and costs of the Naval Architect, Interior Designer, Marine Engineer, Jan Greaves, and any other third parties specifically engaged by Owner in connection with the preparation of the Plans and Specifications, and any modifications thereto.

### Section 9.2 . Equipment

a) The Plans and Specifications and Equipment List may designate specific brands and models for certain Equipment, and for some Equipment may indicate that the Builder may substitute something "equal" or "better", with the approval of the Owner's Representative. If the Builder proposes to substitute something as "equal" or "better" Equipment, it must provide the Owner's Representative a written proposal with full information, including without limitation, the weight, life cycle, performance criteria and cost differentials for the proposed substitution, unless the Owner or Owner's Representative approves in writing any such proposed substitution without requiring a full written proposal.

b) The Equipment incorporated in the Vessel must be that specified in the Specifications or in the Equipment List, or "equal" or "better" Equipment where permitted by the Specification or Equipment List and approved in writing by the Owner or Owner's Representative.

c) The Owner's Representative shall provide his approval or comments on any proposed substitute Equipment within five (5) Business Days of receipt of the proposal from the Project Coordinator.

### ARTICLE 10. CONTRACT PRICE

a) The initial Contract Price is the sum of Twenty-seven Million Ninety-four Thousand Four Hundred Ninety-eight and no/100 Dollars (\$27,094,498.00), inclusive of all adjustments agreed prior to contract signing as set forth on General Contract Price Summary (Final), attached hereto as Exhibit P. The Contract Price is based on the most recently updated Specifications and Plans as of the contract signing, copies of which are attached hereto as Exhibits A and B, respectively. The Contract Price is subject to adjustment (i) for Cost Allowance items that, in the aggregate, are more or less than the Cost Allowance, (ii) for Change Orders as provided in ARTICLE 11, (iii) for any

liquidated damages as provided in Section 19.2., (iv) for any bonuses as provided in ARTICLE 17 h) or Section 19.3, and (v) for any reimbursement due the Builder pursuant to ARTICLE 10 f) in respect of incremental cost increases from vendors resulting from delay in finalizing the Plans or Specifications for which delay the Owner is held responsible. The final Contract Price shall be the initial Contract Price plus or minus the net price adjustment for all Cost Allowance Items in the aggregate, and for Change Orders under ARTICLE 11, plus or minus the net price adjustment(s) for any liquidated damages and/or bonuses under ARTICLE 19 or ARTICLE 17 h) and/or ARTICLE 17 b), and plus any reimbursement due the Builder pursuant to ARTICLE 10 f).

b) The Contract Price includes the Cost Allowance for the Cost Allowance Items set forth in Exhibit K and further detailed in the Plans and Specifications and/or Equipment List. As part of the Contract Price, the Builder is to cooperate with the Owner and Suppliers in purchasing, manufacturing, and/or installing Cost Allowance Items approved by the Owner as provided for in the Specifications or Equipment List.

c) For purposes of identifying and controlling the amounts that may be allocated or counted toward the Cost Allowance, it is agreed that only the following amounts may be allocated or counted toward the Cost Allowance Items individually, and toward the Cost Allowance in the aggregate:

(i) The net wholesale delivered cost (i.e. wholesale cost net of all discounts, allowances or profit, plus transport insurance, plus freight) of Cost Allowance Items obtained from Suppliers, or of materials specifically and exclusively for the manufacturing of such items by Builder;

(ii) The net wholesale costs of all work on Cost Allowance Items performed by Subcontractors;

(iii) A markup for overhead and profit allowance of 12.5% on the net wholesale delivered cost to Builder of Cost Allowance Items or materials for such items obtained from Suppliers;

(iv) A markup for overhead and profit allowance of 10 % on the net wholesale cost to Builder of work on Cost Allowance Items performed by Subcontractors, except in the case of the interior joinery package, for which an overhead and profit allowance of 10% will be allowed only within the amount of the Cost Allowance allocated to that Cost Allowance Item, and only a 5% overhead and profit allowance will be allowed on costs in excess of that allocated amount;

(v) Charges at the following rates for labor performed by Builder's employees on Cost Allowance Items, which are inclusive of overhead and profit allowance:

A. Engineering labor by qualified engineers --



- (A) During 2005, \$70/hour;
- (B) During 2006, \$73/hour;
- (C) During 2007, and any time thereafter, \$75/hour.

B. Production labor -

- (D) During 2005, \$55/hour;
- (E) During 2006, \$57/hour;
- (F) During 2007 and at any time thereafter, \$59/hour; and

(vi) The actual increase in premiums, if any, for Builder's Risk Insurance directly resulting from increased value of the Vessel, above the initial Contract Price, due to excess cost on the Cost Allowance Items in the aggregate.

d) If the total amount counted toward the aggregate of all Cost Allowance Items is less than the Cost Allowance, the Builder shall recognize a credit reducing the Contract Price for the difference. Conversely, if the total amount counted toward all Cost Allowance Items exceeds the Cost Allowance, the Owner shall pay the Builder the difference as an increase to the Contract Price.

e) It is the intention of the Owner to avoid or minimize, to the greatest extent lawfully possible, the imposition of state sales or use or other taxes with respect to the Vessel, which may involve delivery of the Vessel in a location or jurisdiction outside of Connecticut. The Builder shall use its best efforts to cooperate with the Owner to that end, but only to the extent permitted by applicable laws and regulations, and shall provide the Owner with all such documentation as may be needed from the Builder to assist the Owner in establishing exemption from such sales or use or other taxes.

f) Builder has developed the Contract Price based on cost information provided by reliable vendors and subcontractors at the time of Builder's response to the Owner's RFP. Should Builder be unable to place an order with any vendor for materials or services due solely to a delay caused by the Owner, Naval Architect, Interior Designer, Ian Greeves, or Marine Engineer in finalizing Plans or Specifications subsequent to the execution of this Agreement, and such delay directly resulted in an increase in the price of such service or material due to either intervening vendor price increases or changes in currency foreign exchange rates, then, provided the Builder did not contribute in any way to such delay, the Builder shall have the right to be reimbursed by the Owner for the incremental costs incurred for such materials or services as a result of such delay. The Builder must provide reasonable documentation proving any alleged delay prevented a timely order at the original price, that the delay directly resulted in a price increase, and the incremental amount of the price increase. Builder shall use reasonable efforts to minimize price risks by seeking U.S. dollar denominated pricing and by

taking prudent action to minimize risk of vessel price increases, which may include submitting purchase orders or advance deposits to vendors to guaranty pricing.

g) The Contract Price is inclusive of all taxes (other than sales tax, if any, which shall be borne by the Owner), fees, charges, levies and other duties for which the Builder is responsible as provided in ARTICLE 23 that may be imposed on the Vessel and her components prior to delivery of the Vessel to the Owner pursuant to signing, by the parties hereto, of the Protocol of Delivery and Acceptance (Exhibit D)

#### ARTICLE 11. CHANGE ORDERS

a) The Owner and the Owner's Representative, subject to the limitations set forth in ARTICLE 4, may after consultation with the Project Coordinator request modifications to the Plans and/or Specifications by submitting a Request for Change Order in the form of Exhibit C.

b) The Builder may propose a Change Order under the circumstances contemplated in ARTICLE 7 d), or if the Builder proposes changes that would improve the Vessel or lower its cost.

c) Each Request for Change Order may include proposed additions and/or deletions and/or modification to the Plans and/or Specifications. Change Orders may be requested at any time up to the delivery of the Vessel.

d) The Owner or the Owner's Representative shall not order any Change Order when:

(i) the Change Order would have adverse consequences on or impair the safety of the Vessel;

(ii) the Change Order may preclude the classification of the Vessel by the Classification Society, or the registration of the Vessel by the Flag State; or

(iii) the Change Order would have adverse consequences on parts of the Vessel already built and impossible to modify.

e) All Change Orders shall be commenced through submission of a Request for Change Order Form, which is attached hereto as Exhibit C.

f) As soon as reasonably possible but at the latest within ten (10) Business Days after receipt of the Request for Change Order from the Owner's Representative in accordance with this ARTICLE the Project Coordinator shall submit to the Owner's Representative a written quotation signed on behalf of the Builder that:

(i) specifies the amount of any increase or decrease in the Contract Price that would result from the proposed Change Order, in the pricing of which the Project Coordinator shall allow for labor and materials and markup for overhead and

profit allowance in the same manner as set forth in ARTICLE 10 c) with respect to Cost Allowance Items;

(ii) provides a detailed breakdown and comparison of the pricing of the materials and labor that would be involved in effecting the proposed Change Order with the pricing of the materials and labor that would be involved in performing the corresponding work as originally contemplated, that is, if the proposed Change Order were not effected.

(iii) specifies the amount of delay or acceleration, if any, to the Delivery Date that would result from the proposed Change Order, and the revised Delivery Date;

(iv) specifies the extent, if any, to which weight or sound, or vibration guarantees would be affected by the proposed Change Order;

(v) specifies any other changes to the Agreement or the Plans and Specifications that would be required to implement the proposed Change Order; and

(vi) provides the Builder's advice regarding the positive or negative impact the proposed Change Order may have on the Vessel or its characteristics.

The Builder's cost to prepare, engineer, and estimate the quotation in response to a Request for Change Order submitted by the Owner or Owner's Representative shall be deemed included in the quotation. If the Owner withdraws the Request for Change Order, however, the Builder reserves the right to charge such costs to the Owner.

g) Within seven (7) calendar days of receiving the Project Coordinator's quotation, the Owner or Owner's Representative (subject to the limitations of ARTICLE 4 d)) shall:

- (i) accept and sign the same,
- (ii) negotiate further with the Project Coordinator, or
- (iii) reject the quotation and withdraw the Request for Change Order.

b) Upon the execution of a Change Order by both the Builder or the Project Coordinator (subject to the limitations of ARTICLE 5 c)) and the Owner or the Owner's Representative (subject to the limitations of ARTICLE 4 d)), the Plans and Specifications, the Contract Price, the Delivery Date, the Vessel characteristics, or other affected provision of this Agreement shall be deemed modified or amended to the extent, but only to the extent, specified in the signed Change Order.

i) The Owner shall not be obligated to pay for any Change Order not signed and approved in writing by the Owner, or by the Owner's Representative (subject to the

limitations of ARTICLE 4 d)), and by the Builder or the Project Coordinator (subject to the limitations of ARTICLE 5 c)).

j) Any Change Orders made and agreed upon and signed by the Owner and Builder shall be paid for by the Owner, insofar as the Change Order would cause an increase in the Contract Price, fifty percent (50%) at the time the next occurring Milestone Payment is due and fifty percent (50%) at the time of the Milestone Payment next occurring after the completion of the work covered by the Change Order. If a Change Order represents a savings in cost, such adjustment shall be credited to the Owner fifty percent (50%) at the time the next occurring Milestone Payment is due and fifty percent (50%) at the time of the Milestone Payment next occurring after the work represented by such Change Order was originally scheduled to be completed according to the Construction Schedule, or is actually completed, whichever is earlier.

k) In the absence of a mutually satisfactory agreement as to a Request for Change Order, a dispute may be referred for resolution in accordance with ARTICLE 27.

l) During the time that a Request for a Change Order is pending, the Builder shall be entitled to continue construction in accordance with the existing Plans and Specifications, until such time as the dispute is resolved or the Change Order is fully executed by both parties.

m) Owner shall not be responsible for any cost increase of any kind unless (i) a corresponding Change Order has been fully executed by the Builder or by the Project Coordinator (subject to the limitations of ARTICLE 5 c)) and by the Owner or by the Owner's Representative (subject to the limitations of ARTICLE 4 d)), or (ii) the Builder is entitled to reimbursement pursuant to ARTICLE 10 f) for incremental cost increases from vendors resulting from delay in finalizing the Plans or Specifications for which delay the Owner is held responsible.

## ARTICLE 12. CONDITIONS AND TERMS OF PAYMENT

### Section 12.1 - Warranty Guarantee Account

a) As security for the Builder's obligations under this Agreement, including its post-delivery warranty obligations under ARTICLE 19, the parties agree that there shall be established a "Warranty Guarantee Account", which shall be a separate interest bearing escrow account to be maintained by the Owner's counsel, Holland & Knight LLP, as Escrow Agent, pursuant to the Escrow Agreement in the form of Exhibit J. The Owner shall be entitled to pay to the Escrow Agent, rather than directly to the Builder, a holdback portion equal to two percent (2%) of each "Milestone Payment" due under Section 13.2, to be deposited into the Warranty Guarantee Account, until the account balance reaches a cap of Four Hundred Thousand Dollars (\$400,000.00). The Builder's right to receive the funds held in such account is conditioned upon the performance by the Builder of all of its obligations under this Agreement.



b) The Owner shall be entitled to claim against and recover from the Warranty Guarantee Account any amounts the Owner is entitled to recover in the event of a default by the Builder that results in a termination of this Agreement by the Owner pursuant to ARTICLE 21. Alternatively, absent such a termination, the Owner shall be entitled to claim against and recover from such account any amounts the Owner is entitled to recover in the event of default by the Builder of any of its obligations with respect to Construction and delivery of the Vessel in conformance with this Agreement, including any warranty obligations under Section 19.1 and any liquidated damages under Section 19.2.

c) During the Warranty Period the Owner shall be entitled to submit a claim or claims against the Warranty Guarantee Account for all such amounts the Owner is entitled to recover in the event of default by the Builder of its post-delivery warranty obligations with respect to the Vessel. Subject always to the limitations of Section 12.1 d), Section 12.1 e), and Section 12.1 f) below, the Builder shall be entitled to submit a claim or claims against the Warranty Guarantee Account for reimbursement of the Builder's direct out of pocket costs incurred in performing its post-delivery warranty obligations under Section 19.1.

d) Six months after the date of delivery of the Vessel, the Builder shall be entitled to a disbursement from the Warranty Guarantee Account in a net amount, if any, calculated as follows: one-third (1/3) of the balance that was in the Warranty Guarantee Account immediately after delivery of the Vessel to the Owner, minus (i) any amounts that may have been disbursed from such account to either the Owner or the Builder within the six month period on account of warranty or liquidated damages claims made by the Owner, and (ii) the value of any warranty claims or liquidated damages claims that have been asserted by the Owner, in good faith, prior to or during the six month period but which have not yet been paid, either because they have not yet been agreed by the Builder or because they have not yet been resolved pursuant to ARTICLE 27 and paid. If the amount calculated in the manner described above is not a positive number, then no disbursement shall be made to the Builder.

e) Twelve months after the date of delivery of the Vessel, the Builder shall be entitled to a disbursement from the Warranty Guarantee Account in a net amount, if any, calculated as follows: two-thirds (2/3) of the balance that was in the Warranty Guarantee Account immediately after delivery of the Vessel to the Owner, minus (i) any amounts that may have been disbursed from such account to either the Owner or the Builder within the twelve month period on account of warranty or liquidated damages claims made by the Owner, (ii) any amount that may previously have been disbursed to the Builder pursuant to Section 12.1 d) above, and (iii) the value of any warranty claims or liquidated damages claims that have been asserted by the Owner, in good faith, prior to or during the twelve month period but which have not yet been paid, either because they have not yet been agreed by the Builder or because they have not yet been resolved pursuant to ARTICLE 27 and paid. If the amount calculated in the

margin described above is not a positive number, then no disbursement shall be made to the Builder.

f) In order that there shall remain partial security for any warranty claims that may arise late in the warranty term, the Builder shall in no case be entitled, prior to the expiration of the Warranty Period, to any payment for reimbursement pursuant to Section 12.1 c) or to any disbursement pursuant to Section 12.1 d) or Section 12.1 e) above if and to the extent that any such reimbursement or disbursement would result in the aggregate amount of all payments that have been made from, plus all unresolved claims asserted in good faith against, the Warranty Guarantee Account exceeding a limit of two-thirds (2/3) of the original balance that was in the Warranty Guarantee Account immediately after delivery of the Vessel to the Owner.

g) When all timely claims against the Warranty Guarantee Account made by the Owner have been resolved either by agreement with the Builder or pursuant to ARTICLE 27, or if there shall be no outstanding claims against the Warranty Guarantee Account at the termination of the Warranty Period, any remaining balance of the Warranty Guarantee Account shall be payable over to the Builder.

#### Section 12.2. Payments

a) The Owner shall pay the Contract Price of Twenty-seven Million Ninety-four Thousand Four Hundred Ninety-eight and no/100 Dollars (\$27,094,498.00) in the installments described below (each installment after the Deposit referred to as a "Milestone Payment", and if referring to more than one, "Milestone Payments"), the amount of each of the Milestone Payments being divided and payable 98% to the Builder and 2% to the Escrow Agent, the latter amounts to be deposited in the Warranty Guarantee Account as provided in Section 12.1, until the balance in the Warranty Guarantee Account shall reach Four Hundred Thousand Dollars (\$400,000.00). Thereafter, 100% of each Milestone Payment shall be payable to the Builder. The Deposit and Milestone Payments shall be payable at the following times:

(i) The initial installment in the amount of five percent (5%) of the initial Contract Price (the "Deposit"), towards which shall be counted the \$500,000.00 deposit paid by the Owner to the Builder pursuant to the Letter of Intent dated February 17, 2005, is payable on the Effective Date of this Agreement, provided the Owner has first received Builder's Invoice and the Escrow Agreement has first been fully executed by Builder, Owner, and Escrow Agent. No portion of the Deposit shall be paid to the Escrow Agent.

(ii) Subject to all of the conditions and limitations set forth elsewhere within Section 12.2, the installments constituting Milestone Payments 02 - 22 as described below, ~~plus or minus~~ any adjustments to be recognized pursuant to the terms of this Agreement, shall be paid upon the achievement of the respective milestones in the Construction of the Vessel as described below for each such Milestone Payment:

*Gemini Installation Payments:*

Initial  
Contract  
Price \$ 27,084,498

<i>Payment No. / Milestone Descriptions</i>	<i>Anticipated Dates</i>	<i>Payment %</i>	<i>Payment value</i>
01-The Deposit, upon contract signing (with a credit to be recognized for the \$500,000 Deposit paid pursuant to the Letter of Intent)	Jun-05	5.0%	\$1,354,725
02-expenditure ordering of major equipment items and packages	Jul-05	7.0%	\$1,896,615
03-joinery subcontract signed	Sep-05	4.0%	\$1,083,780
04-start building aluminum	Oct-05	4.0%	\$1,083,780
05-hull units 21 p/s metal structure completed	Dec-05	5.0%	\$1,354,725
06-hull units 41 p/s metal structure completed	Feb-06	5.0%	\$1,354,725
07-hull units 51 p/s metal structure completed	May-06	5.0%	\$1,354,725
08-hull units 32 p/s metal structure completed	Jun-06	5.0%	\$1,354,725
09-hull units 11 p/s metal structure completed	Jul-06	5.0%	\$1,354,725
10-hull units 51 p/s metal structure completed	Aug-06	5.0%	\$1,354,725
11-all hull and house metal structure joined	Sep-06	5.0%	\$1,354,725
12-bridges & generators mounted on foundations	Oct-06	5.0%	\$1,354,725
13-bow and stern thrusters mounted on foundations	Nov-06	5.0%	\$1,354,725
14-installation of thermal insulation complete	Dec-06	4.0%	\$1,083,780
15-deck area rough-in temporary complete	Jan-07	4.5%	\$1,219,252
16-Sea Water / Fresh Water / Fuel Oil major piping (H/Went) installed	Feb-07	4.5%	\$1,219,252
17-hull fairing and first primer top coat applied	Mar-07	4.5%	\$1,219,252
18-Sea Water / Fresh Water / Fuel Oil major piping runs hydro tested	Apr-07	4.5%	\$1,219,252
19-power to all distribution panels	May-07	4.0%	\$1,083,780
20-external tank dewatering installation complete	Aug-07	4.0%	\$1,083,780
21-launch	Sep-07	2.5%	\$677,362
22-delivery	Nov-07	2.5%	\$677,362

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INITIALS OF BUILDER

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(iii) The final installment, payable upon the signing of the Protocol of Delivery and Acceptance (the "Delivery Payment"), shall be an amount equal to two and one-half percent (2.5%) of the initial Contract Price, plus or minus any adjustments for the unpaid or uncredited portions of (i) Cost Allowance Items that, in the aggregate, are more or less than the Cost Allowance, (ii) Change Orders as provided in ARTICLE 11, (iii) any liquidated damages as provided in Section 19.2, (iv) any bonuses as provided in ARTICLE 17 b) and/or in Section 19.3, and (v) any amounts that are due to the Builder under ARTICLE 10 f). The amount of the Delivery Payment shall also be subject to reduction for any amount the Owner is entitled to withhold pursuant to ARTICLE 17 e) with respect to "punch list" items.

b) Notwithstanding the Milestone Payment provisions of Section 12.2 a), however, unless otherwise mutually agreed the Owner shall in no case be obligated to pay any Milestone Payment earlier than during the calendar month that precedes the month of the Anticipated Date of payment reflected above with respect to that particular Milestone Payment. (By way of example, if the Anticipated Date for a particular Milestone Payment were May 2006, the Owner would not be obligated to pay such Milestone Payment at any time prior to April 1, 2006, even though the work covered by that Milestone Payment might be completed before that date.)

c) After the payment of the Deposit, Milestone Payments (subject to any adjustments to be recognized pursuant to the terms of this Agreement) will be due five (5) Business Days after the Owner has received the Builder's Invoice and the corresponding Milestone Certificate in the form of Exhibit L, in each case signed by (i) the Builder or the Project Coordinator and (ii) the Owner or the Owner's Representative, and at least every other Milestone Certificate also signed by the Marine Engineer and the Classification Surveyor. Each Invoice for Milestone Payments shall identify the related Milestone completed, and shall also detail any payments or credits due specifically with respect to Change Orders or Cost Allowance Items, and any other proper charges or credits.

d) If the Owner in good faith disputes any portion of any Invoice and the Owner and Builder are not able to amicably resolve the dispute by the date payment is otherwise due on the Invoice, the Owner shall be entitled to deposit the amount of the disputed portion with the Escrow Agent. The Escrow Agent shall hold the disputed portion in an interest bearing escrow account until either the Owner and Builder have amicably resolved the dispute, or the dispute has been resolved pursuant to ARTICLE 27. Any of such disputed amounts to which the Builder is determined to be entitled shall be disbursed 98% to the Builder and 2% to the Warranty Guarantee Account (subject to the \$400,000.00 cap), as provided in Section 12.2 a). Accrued interest on the disputed funds shall be disbursed to the party or parties determined to be entitled to a distribution of the escrowed funds, proportionately according to their respective distributions.





e) Subject to the Owner's rights under Section 12.2 d), if the Owner fails to make a payment identified in Section 12.2 a) within thirty (30) days after such payment is due, interest shall thereafter begin to accrue on the unpaid portion of such payment at the Default Rate. In the event the Owner is delinquent in payments aggregating at least One Hundred Thousand Dollars (\$100,000.00) for more than thirty (30) days, then the Builder shall be permitted, upon notice to the Owner, to suspend or cease all work on the Vessel until the Owner has paid all amounts then owing, in which case the Delivery Date may be extended as and to the extent provided in Section 13.2 c).

f) All payments to the Builder are to be made in United States Dollars immediately available at the Builder's account specified as the Payment Location. Expenses for remitting payments and any other expenses connected with such payments shall be for the account of the Owner.

g) The making of Milestone Payments and/or payments with respect to Change Orders shall in no way imply acceptance of the work performed on the Vessel, or acceptance of the Vessel.

h) Owner's payment obligations are subject always to the Owner's termination rights under this Agreement.

## ARTICLE 13. COMMENCEMENT AND DELAY

### Section 13.1. Commencement

a) The obligations of the parties under this Agreement shall commence upon, and are conditioned upon the happening of, the following events:

- (i) the Agreement has become effective pursuant to ARTICLE 30;
- (ii) the Owner has appointed the Owner's Representative pursuant to ARTICLE 4 a);
- (iii) the Builder has appointed the Project Coordinator pursuant to ARTICLE 5 a);
- (iv) the Escrow Agreement has been executed by the parties and the Escrow Agent pursuant to Section 12.1; and
- (v) the Owner has tendered the Deposit pursuant to Section 12.2 a)(i).

b) The Commencement Date shall be the date on which all the events specified in Section 13.1 a) have been fulfilled. Upon such fulfillment, the Commencement Date shall be identified and stated in a written document signed by the Owner's Representative and the Project Coordinator.

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c) If the Commencement Date does not occur within thirty (30) days after the Effective Date of this Agreement, then a party that has timely satisfied all of the conditions for which it is responsible under Section 13.1 a) shall have the option to terminate this Agreement by giving written notice to the nonperforming party.

#### Section 13.2. Time For Completion

a) Subject to the terms of this Agreement, the Builder is obligated to complete and deliver the Vessel by the Delivery Date as defined herein.

b) The Builder shall only be entitled to extension of the Delivery Date to the extent set forth in any Change Order(s) signed by both parties, and/or to the extent agreed pursuant to Section 13.2 c) - Section 13.2 e) below, or to the extent determined in accordance with ARTICLE 27.

c) If the Builder considers that any of the following events:

(i) any Force Majeure event, or

(ii) any delay, impediment, or prevention resulting from the acts or omissions of the Owner, Owner's Representative, Naval Architect, Interior Designer, Marine Engineer, Jan Groves, or any third parties specifically engaged by Owner, including, without limitation, delays in the delivery of Owner Supplied Items or in the payment of Milestone Payments, or

(iii) the late delivery to the Builder of contract-required machinery, equipment and supplies to be incorporated in the Vessel where Builder proves that Builder's contracting for such machinery, equipment and supplies was reasonable and prudent and undertaken in plenty of time in advance of the need, that the late delivery did not result from late payment or nonpayment by Builder or from a vendor's refusal of credit to Builder, that Builder has exercised due diligence and its best efforts in the performance of any acts required of Builder, and that Builder has exercised due diligence and its best efforts in expediting deliveries under Builder's purchase contract or in seeking equivalent substitute performances;

are such as to delay or materially impede the construction of the Vessel and thus entitle the Builder to extension of the Delivery Date, the Builder shall deliver to the Owner's Representative, within fifteen (15) Business Days after the occurrence of the relevant event, a notice supported by full and detailed particulars in justification of a claim for a specified extension of the Delivery Date. Failure by the Builder to timely deliver a claim for extension of the Delivery Date based on the occurrence of any particular event shall preclude the Builder from later claiming any delay or extension relating to that event.

d) The Owner's Representative shall, in his reasonable judgment, approve, reject, or comment on any timely, fully detailed claim for extension in writing within ten (10) Business Days after receipt of the notice and full particulars.

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n) If the claim for extension of time is agreed in writing by the Owner or Owner's Representative, the Delivery Date shall be extended accordingly.

f) If the Owner or Owner's Representative and the Project Coordinator cannot agree as to any claimed extension of the Delivery Date within ten (10) Business Days after the submittal of the response of the Owner's Representative to the Project Coordinator's claim for extension of time made pursuant to Section 13.2 c), the dispute may be referred for resolution in accordance with ARTICLE 27.

g) In the event of any dispute, the Builder shall continue the construction of the Vessel during the pendency of any claim for an extension of the Delivery Date or during the pendency of any arbitration proceeding.

#### ARTICLE 14. (DELETED)

#### ARTICLE 15. LAUNCHING

The Builder shall give the Owner's Representative fourteen (14) calendar days notice of any launching of the Vessel. The notice shall specify the location, date and time of the launching.

#### ARTICLE 16. DOCK TRIALS, SEA TRIALS, AND ACCEPTANCE

a) A Trials Committee shall be established by the Owner and the Builder. The Trials Committee will consist of:

- (i) the Project Coordinator,
- (ii) the Owner's Representative,
- (iii) the Marine Engineer,
- (iv) the Naval Architect,
- (v) the Classification Surveyor,
- (vi) a sound and vibration engineer to be nominated by the Owner; and
- (vii) a marine surveyor to be nominated by Owner.

b) The Trials Committee shall attend the dock and sea trials of the Vessel on board to witness the performance of the Vessel and to assess the conformity of the Vessel with this Agreement.

c) The Sea Trials shall be conducted by the Builder in accordance with the guidelines, testing and trials programs set out in the Specifications. The Builder shall



provide at its own cost all necessary crew, consumables and equipment for the safe operation and navigation of the Vessel during the Sea Trials.

d) The Builder shall give the Owner and the Trials Committee at least twenty-one (21) calendar days written notice of the anticipated date, commencement time, and place of the Sea Trials of the Vessel. The Builder will provide a five (5) calendar day notice confirming the actual date, commencement time, and place of the Sea Trials of the Vessel.

e) In the event of failure of all or any of the Trials Committee to be present at the Sea Trials of the Vessel after due notice to the Owner has been given, the Owner shall be deemed to have waived its right to have any missing Trials Committee member on board the Vessel at the Sea Trials and the Builder may conduct the Sea Trials without the missing Trials Committee member(s) (as the case may be) being present, unless if for special reasons or 'Force Majeure' members were prevented from attending, in which case the Builder shall cooperate in the best possible way to make their participation possible. The foregoing provisions of this ARTICLE 16 e) notwithstanding, however, the Owner may elect to postpone the Sea Trials if certain members of the Trials Committee whose presence is required by the Owner are not on board. In that case, however, the Builder shall be entitled to a corresponding extension of the Delivery Date if the Sea Trials are delayed due to the inability of a member of the Trials Committee, whose presence is required by the Owner, to attend the Sea Trials when originally scheduled.

f) Within five (5) Business Days after the end of the Sea Trials of the Vessel, the Project Coordinator shall present to the Owner's Representative a trials report stating the performance of the Vessel during the Sea Trials and the extent of the conformity of the Vessel with this Agreement, including the applicable Rules and Regulations of the Classification Society and the Flag State. The Owner's Representative shall provide his approval or comments, in his reasonable judgment, within five (5) Business Days after actual receipt of the report from the Builder.

g) If the Owner's Representative comments on the report are justified, in accordance with this Agreement, the Builder shall make the necessary corrections and perform new Sea Trials as provided in the Specifications.

h) If the Project Coordinator contends that the comments of the Owner's Representative on the sea trial report are unjustified, in accordance with this Agreement, the Project Coordinator and the Owner's Representative shall meet to attempt to resolve the differences, failing which the dispute shall be referred for resolution in accordance with ARTICLE 27.

i) Upon satisfactory conclusion of the Sea Trials, as acknowledged by the Owner's Representative or confirmed in accordance with ARTICLE 27, the Owner's Representative shall execute and deliver to the Builder an acceptance certificate acknowledging that the Builder has fulfilled all of its obligations with regard to the

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Construction of the Vessel and accordingly, that the delivery can proceed. If the Sea Trials reveal material defects or deficiencies with the Vessel, however, that the Builder is unable or refuses to remedy within ninety (90) days after the end of the Sea Trials, the Owner shall have the right to terminate this Agreement and proceed according to ARTICLE 21.

#### ARTICLE 17. DELIVERY

- a) The Project Coordinator shall give at least ten (10) days' written notice to the Owner's Representative of the proposed date of delivery of the Vessel.
- b) The Vessel shall be delivered to the Owner by the Builder safely afloat at a location designated by the Owner within 150 miles of Builder's Shipyard, all delivery expenses as a result of delivering the Vessel in a location other than the Builder's Shipyard being paid by the Owner.
- c) Upon delivery the Owner will be obliged to accept the Vessel and pay the outstanding balance of the Contract Price, provided the Builder has supplied the Owner with all of the documents and other items listed on Exhibit C.
- d) After all documents required under ARTICLE 17 c) have been tendered and accepted by Owner, Builder may request that Owner execute the Protocol of Delivery and Acceptance and take possession of the Vessel, even though some mutually agreed upon minor "punch list" items remain to be finished or corrected which items, if not finished or corrected at the time of delivery and acceptance, would technically prevent the Builder from tendering the Vessel for delivery and acceptance. In this event, Builder shall propose to the Owner a schedule of when, where and how these minor "punch list" items should be dealt with, together with a good faith estimate of the cost to complete such items, which amount the Owner could withhold from the final Delivery Payment pending completion of such items. The Owner may, at its sole discretion and for any reason, including failure to agree on an appropriate amount to be withheld, determine whether to accept possession and delivery of the Vessel and execute a Protocol of Delivery and Acceptance subject to such a "punch list", or whether instead to insist on delivery of the Vessel in full conformance with this Agreement.
- e) In the event the Owner agrees to accept delivery of the Vessel with minor "punch list" items outstanding, the Owner shall be entitled to withhold a mutually agreed sum for completing or correcting all such items at one of the Builder's facilities or at some other facility agreed upon by the Builder. If the "punch list" items are later corrected by the Builder at one of the Builder's facilities, the Owner shall pay Builder the withheld amounts within ten (10) calendar days of the completion or correction of all such "punch list" items by Builder.
- f) On the date of delivery of the Vessel, and subject to Owner's receipt of the documents described in ARTICLE 17 c) above and before taking over the Vessel, the

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Owner will execute and deliver to the Builder the Protocol of Delivery and Acceptance, in the form of Exhibit D, which will declare that

- (i) the Owner has taken possession of the Vessel in full conformity with this Agreement, (except for any exceptions, deficiencies or unfinished items noted by the Owner, or otherwise agreed with the Builder, if applicable);
  - (ii) the Builder has no further duties and responsibilities for the Vessel (except the duties imposed under the Builder's warranties of title, quality, and performance, and the duty to correct any exceptions, deficiencies or unfinished items noted by the Owner, or otherwise agreed with the Builder, if applicable); and
  - (iii) the Owner has taken full responsibility for the Vessel, and assumes risk of loss of or damage to the Vessel.
- g) The Owner shall then take possession of the Vessel.
- h) If the Builder tenders delivery of the Vessel, fully completed, to the Owner on or before October 17, 2007, the Owner will pay to the Builder an early delivery bonus in the amount of \$250,000.00.

#### ARTICLE 18. TITLE TO THE VESSEL AND RELATED PROPERTY

a) Notwithstanding anything contained in this Agreement that might be construed to the contrary, immediately on payment of the Deposit as provided for in Section 12.2 a)(i), the Vessel as it is constructed and every part thereof, and all Equipment, components, appurtenances, materials and supplies, whether wholly or partially finished or unfinished, from time to time appropriated to or intended for the Vessel or on order from Supplier's or Subcontractors or approved by the Owner or the Owner's Representative, and whether in the Builder's Shipyard or workshops or elsewhere on or off the Builder's premises, and whether or not numbered pursuant to ARTICLE 18 d), shall become and be and remain the property of the Owner, who shall have absolute title thereto (but all such property being at the risk of the Builder until acceptance of delivery of the completed Vessel by the Owner), notwithstanding that any of such Equipment, components, appurtenances, materials or supplies may subsequently be worked upon by the Builder or Subcontractors or otherwise processed or incorporated into the Vessel, and such property shall not be within the ownership or disposition of the Builder. The Builder shall at all times have a possessory lien or right of retention thereon for any unpaid portion of the Contract Price then actually due and payable, and for any other monies then due and payable from the Owner to the Builder hereunder. The Builder shall issue to the Owner at the commencement of Construction such letters, affidavits, or other acceptable documents of title and other particulars, all in form acceptable to the Flag State so that the Vessel may be registered in the Flag State as a vessel under construction, titled in the name of the Owner.

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b) If, notwithstanding the express provision of ARTICLE 18 a), the Vessel or any of the other property described in ARTICLE 18 a) is deemed not to be the property of, and owned by, the Owner, the Builder alternatively hereby grants a security interest in all of such property in favor of the Owner, and further grants a security interest in all of Builder's rights in and/or with respect to and/or arising from any and all deposits or partial or full payments made to Suppliers or Subcontractors relating to any such property, and in the proceeds of all of the foregoing. The Owner shall have the right to file UCC-1 Financing Statements against the Builder covering all such property without the further consent or signature of the Builder. The security interests granted hereby shall secure all of Builder's obligations to the Owner under this Agreement.

c) Except for UCC-1 Financing Statements in favor of Builder as provided in ARTICLE 31 d) and statutory liens in favor of Builder, no mortgages or liens or other encumbrances may be registered against the Vessel by the Builder or any Subcontractor or Supplier without the prior written consent of the Owner, and each subcontract entered into by the Builder shall so state. If the Owner wishes to obtain financing on the Vessel while under construction, the Builder will, if required by any lender (but without waiving its possessory lien and right of retention and UCC-1 Financing Statements for unpaid amounts then actually due and payable) subordinate to such lender with respect to all amounts that have been paid to the Builder by the Owner, conditioned however upon all amounts that are actually then due and payable by the Owner under this Agreement having been paid.

d) Immediately upon any property described in ARTICLE 18 a) becoming or being deemed the property of the Owner under the provisions of this ARTICLE 18, the Builder shall conspicuously place or cause to be placed on the bow of the Vessel, or at such other appropriate place as may be required by the appropriate Flag State official, and also on all such other property, the Builder's ID Number 85135 for the Vessel, and without prejudice to the Owner's rights hereunder, the Builder shall take all necessary steps to cause all such property to be numbered as aforesaid by itself or by its Suppliers and Subcontractors with all reasonable expedition.

e) The Builder shall so arrange its contractual arrangements with all of its Subcontractors and Suppliers that full effect will be given to the provisions of this ARTICLE 18 and, without limiting the foregoing, shall ensure that all such property shall be supplied on the following conditions:

(i) that the title to such property supplied by a Subcontractor or Supplier (whether in the course of construction or completed and whether before or after delivery to the Builder) shall vest immediately in the Builder (and thence pursuant to ARTICLE 18 a), immediately in the Owner), subject only to the Subcontractor's possessory lien, if any, for any unpaid balance of the purchase price of such property; and

(ii) that the Subcontractor or Supplier shall not, upon receipt by it of the purchase price for such property, be entitled, as against the Owner, to claim any

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title or lien therein by reason of obligations or liabilities of the Builder to the Subcontractor or Supplier in respect of any other deliveries made by the Subcontractor or Supplier to the Builder, or for any other reason.

f) Possession of the Vessel shall be transferred to the Owner on the Delivery Date in accordance with the terms of this Agreement or on such other date as the Owner may be entitled to take possession of the Vessel in accordance with the terms of this Agreement.

g) The Builder hereby warrants that on acceptance and delivery of the Vessel, after rectification of any deficiencies, there will not be any liens upon or rights in the Vessel or any of its components or appurtenances, either for or on account of any work done upon or about, or any accident happening upon or about, the Vessel or any of its components or appurtenances, or for or on account of any other cause or thing or any claim or demand of any kind whatsoever, other than by reason of non-payment of any amount due the Builder by the Owner hereunder, or non-payment of any amount owed by the Owner to its suppliers in respect of any Owner Supplied Items or to any persons specifically engaged by the Owner. If the Builder fails to remove a lien, charge or encumbrance, or fails to establish a bond or other security for the same that is satisfactory to the Owner, then the Owner may, but is not obligated to, satisfy the same and deduct the amount thereof, together with any expenses incurred in connection therewith, from the amount of any remaining payment due to the Builder. If the remaining amounts due to the Builder are insufficient to permit the deduction of the entire cost and expense incurred by Owner, Builder shall be liable to Owner for the deficiency and will pay same to Owner upon demand.

h) All plans, specifications, working drawings, technical descriptions, calculations, test results and other data, and all other such information and documents concerning the design, engineering and construction of the Vessel shall at all times be the property of the Owner or Naval Architect or Interior Designer or Marine Engineer (as may be determined pursuant to the agreements between the Owner and each of them, respectively), and the Builder shall deliver all such items in its possession to the Owner at the time of delivery and acceptance of the Vessel. The Builder shall not bring such items to the knowledge of third parties without the Owner's written consent.

i) The Vessel as it is constructed (whether wholly or partly finished or unfinished) and all Equipment, components, appurtenances, materials and supplies appropriated, or intended to be appropriated, to the Vessel whether in the Builder's Shipyard or elsewhere in the control of the Builder or its Subcontractors shall from the Effective Date of this Agreement be and remain at the risk of the Builder until the Vessel is delivered to and accepted by the Owner. Upon acceptance of delivery of the Vessel by the Owner, risk of loss of or damage to the Vessel shall be transferred to the Owner, and thereafter all responsibilities on the part of the Builder shall cease with the exception of any agreed upon outstanding items, and the warranties of title, quality and performance provided in this Agreement.



## ARTICLE 19. WARRANTIES

### Section 19.1 Warranties as to Quality

a) Unless otherwise agreed pursuant to ARTICLE 17 d), the Builder will repair or replace all defects in the Vessel brought to Builder's attention by Owner prior to the initial delivery and acceptance of the Vessel pursuant to ARTICLE 17.

b) Builder, for the duration of the Warranty Period, will repair or replace any defects in materials (other than Owner Supplied Items) or workmanship that are not in conformity with the Plans, Specifications and Standards and that are discovered on the Vessel within the eighteen (18) month-period following the date on which the Owner executes the Protocol of Delivery and Acceptance of the Vessel (the "Warranty Period"), and further warrants that all labor furnished by Builder hereunder shall have been performed in a good and workmanlike manner and in conformity with the Plans, Specifications and Standards, and that all materials furnished by Builder hereunder and made a part of the Vessel are free of defects, and Builder further guarantees the Vessel against defects of any kind whatsoever in workmanship and/or materials (excluding Owner Supplied Items, but including Builder's or its Subcontractors' assembly or installation thereof) during the Warranty Period.

c) The Owner or its duly authorized representative shall notify the Builder in writing during the applicable Warranty Period of any defect, within fourteen (14) days of discovery thereof by Owner or an agent, employee or representative of Owner, for which a claim is made under this ARTICLE and the Owner's written notice shall describe the defect in reasonable details.

d) If the Owner fails to notify the Builder during the applicable time period in accordance with Section 19.1 c), such failure will not void the warranty as to that defect, but the Builder shall have no liability in respect of any increased or additional damages that result from failure to so notify the Builder.

e) The Builder undertakes to notify the Owner's captain or the Owner's counsel by e-mail of the impending expiration of the Warranty Period at least thirty (30) days prior to the expiration of the Warranty Period.

f) The Builder shall not be liable for defects in or damages to the Vessel or its Equipment after delivery of the Vessel, except as specified in this ARTICLE. The Builder shall not be liable for any damage to the Vessel or its Equipment caused by ordinary wear and tear, accident, negligence or willful neglect on the part of the Owner, its employees or agents or any other person including the Vessel's officers, crew or passengers or caused by any work or labor, alteration, addition, modification or repairs performed by any person other than the Builder or any of Builder's Subcontractors. It is hereby specifically acknowledged that workmanship and materials that are in conformity with the Plans, Specifications and Standards shall not be deemed a defect. Any workmanship or materials that in fact prove to be defective during the Warranty

Period, however, will be deemed not to have been in conformity with the Plans, Specifications and Standards.

g) Builder's warranty shall not apply to Equipment specified in the Specifications or Plans that is manufactured by someone other than Builder but shall apply to Builder's or its Subcontractors' assembly or application or installation thereof. All warranties of the manufacturers with respect to such Equipment (the "Manufacturers' Warranties") shall be delivered or assigned or transferred by Builder to Owner at the time of delivery of the Vessel. The Builder shall use its best efforts to ensure that the manufacturers of such Equipment provide Manufacturers' Warranties of at least eighteen (18) months duration from the date of delivery of the Vessel. The Builder shall request the manufacturers of such Equipment to provide the most complete and extensive warranties they regularly offer. In the event that extended Manufacturers' Warranties are offered by manufacturers of any of the Equipment, Builder shall notify the Owner of the availability of such extended Manufacturers' Warranties, and obtain such extended Manufacturers' Warranties upon the timely written request of Owner and at the sole cost and expense of Owner. Builder will use its best efforts to assist the Owner in asserting warranty claims under Manufacturers' Warranties, including communicating directly with the manufacturers, and facilitating appropriate warranty documentation and communications.

h) If Owner shall notify Builder of a specific defect in materials or workmanship in accordance with the provisions of this Section 19.1, Builder shall be given complete access to the Vessel and to all records of Owner directly relating to the defect for the purpose of verifying the existence of the specified defect and determining Builder's obligations, if any, to repair or replace it and the appropriate remedy for such defect.

i) The Builder shall remedy promptly at the Builder's Shipyard, or at the Builder's option, cause to be remedied at one of the Builder's affiliated shipyards in Florida or in New York, or in some other location reasonably convenient to the Owner, and at the Builder's expense, any defect of the Vessel that is warranted under this ARTICLE; provided, however, that if Owner reasonably determines that it is impractical to bring the Vessel to the Builder's Shipyard or to one of its affiliated shipyards in Florida or New York, then Builder shall, at Builder's option: (i) cause the necessary repairs or replacements to be made at another shipyard mutually agreed upon between Builder and Owner, or (ii) allow Owner a sum equivalent to the cost of remedying such defect at the Builder's Shipyard.

j) Because the Vessel is contracted for delivery on or before the Delivery Date, and it would be both inconvenient to the Owner and otherwise impractical to return the Vessel to the Builder's Shipyard during the winter months for any necessary work, the Builder undertakes that it will arrange with a shipyard in Florida, or in some other location reasonably acceptable to the Owner, for a service visit for the Vessel, at a time convenient to the Owner within 3-6 months after delivery of the Vessel, and for a sufficient period of time, to address any not yet completed "punch list" items that were permitted by the Owner pursuant to ARTICLE 17, and any warranty claims that have

INITIALS OF OWNER  
INITIALS OF BUILDER

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*[Handwritten Signature]*



been identified by the time of such service visit. The Builder shall be responsible for and undertakes and agrees that it will timely pay the cost of all such work.

l) For the first year after delivery, the Owner plans to use the Vessel in the Caribbean, and thereafter to transit the Panama Canal and use the Vessel in the Pacific. Builder agrees to cooperate with the Owner in selecting warranty repair facilities in locations reasonably convenient to Owner's intended itinerary.

l) Owner agrees not to assert any claim for loss of use resulting from defects covered by the Builder's warranty, provided that Builder ~~promptly~~ repairs or replaces the defective workmanship or materials *within a commercially reasonable period of time.*

m) The Builder shall have the right to send its own representatives, at its expense and risk to the Vessel to inspect and report on the nature and extent of defects complained of and, if thought fit, to remedy them and the Owner shall provide access to the Vessel for this purpose. All travel and living expenses of such engineers and other personnel, and all expenses connected with the acquisition of, provision of, and transport of any materials or parts will be for the Builder's account and payable in advance or the Builder can arrange for the work to be carried out at Builder's expense at the nearest convenient and suitable yard. The Builder will bear all reasonable expenses if it is necessary to bring the Vessel to the Builder's Shipyard or to the nearest convenient and suitable yard for warranty repairs.

n) In the case of defects that render or threaten to render the Vessel inoperable or unsoundworthy or unsafe, the Builder shall make its inspections within ten (10) days of having been notified of such a defect by the Owner pursuant to Section 19.1 c) above. The Builder shall advise the Owner within five (5) days after examination has been completed of its acceptance or rejection of defects as being within the warranty under this ARTICLE, and any dispute shall be referred for resolution in accordance with ARTICLE 27.

o) At the Owner's option, the Builder agrees, at its own cost and expense, to train the Owner's engineer and one crew member in the three month period prior to delivery for familiarization purposes with the Vessel and its systems.

p) The Builder's warranty for the Vessel does not cover any defects in the design of the Vessel furnished by the Naval Architect.

#### Section 19.2 Warranties as to Characteristics and Performance

a) The Builder warrants that the Vessel will achieve the following characteristics and performance:

(i) At delivery the measured weight of the Vessel, determined in the condition "light ship" (as detailed in the Naval Architect's Weight Estimate: GEMINI attached hereto as Exhibit "Q") with all systems commissioned wet (the

"Measured Weight") shall not exceed 213.842 tons (the "Base Guaranteed Weight"), which amount, however, shall be adjusted upward or downward by (1) the amount, if any, that the net aggregate design weight of the interior (excluding insulation) designed by the Interior Designer and approved in due course by the Owner is greater than or less than the net aggregate weight allowance for the interior (excluding insulation) specified by the Naval Architect of 18.124 metric tons (i.e., the 32 M.T. aggregate designed interior weight allowance, minus a 13.876 M.T. insulation allowance for the rough wall and floor and insulation panels to be incorporated in the interior, equals the 18.124 M.T. net aggregate weight allowance for the interior, excluding the rough wall and floor and insulation panels), and (2) the aggregate net amount of any weight increases or decreases agreed pursuant to Change Orders (as so adjusted, the "Adjusted Guaranteed Weight");

(ii) The noise levels in the Vessel as measured during the Sea Trials will not exceed those specified under Sections 14.01.01 and 14.01.02 of the Specifications; and

(iii) The vibration levels in the Vessel as measured during the Sea Trials will not exceed those specified in Section 14.03 of the Specifications.

b) The Vessel's characteristics may change as a result of Change Orders authorized under ARTICLE 11. The permissible extent of any change in the Vessel's characteristics, however, must be specified in the document evidencing the Change Orders at the time the document is signed.

c) Failure to meet any of these Vessel characteristics, as modified by any signed Change Orders, shall result in liquidated damages as follows:

(i) Excessive Weight: If the Measured Weight exceeds the Adjusted Guaranteed Weight, then at the Owner's option either the Builder shall pay or the Owner may deduct from the Delivery Payment, by way of liquidated damages and not as a penalty, an amount determined as follows:

A. If the excess is less than 10 metric tons, no liquidated damages;

B. If the excess is at least 10 metric tons, but not greater than 15 metric tons, the liquidated damages amount shall be \$100,000 plus an additional \$50,000 for every full metric tonne over 10 metric tonnes;

C. If the excess is greater than 15 metric tons, the liquidated damages amount shall be \$350,000 plus an additional \$100,000 for every full metric ton over 15 metric tons.

(ii) Excessive Noise: If the noise levels as measured during the Sea Trials exceed the higher number of the two-decibel range specified in Sections 14.01.01

and 14.01.02 of the Specifications for any specified zone, then at the Owner's option either the Builder shall pay or the Owner may deduct from the Delivery Payment, by way of liquidated damages and not as a penalty, an amount determined as follows:

A. If the excess in any specified zone is less than 2 decibels, no liquidated damages for that zone;

B. If the excess in any of the specified zones is 2 decibels or more, then the liquidated damages amount for each of such zones in which the excess is 2 decibels or more shall be U.S.\$10,000 plus an additional U.S.\$10,000 for every full decibel in excess of 2 decibels above the specified levels in each such specified zone.

(iii) Excessive Vibration: If the respective maximum vibration levels, above 6 Hz, as measured during the Sea Trials in each of the same specified zones in which noise levels are to be measured exceed the respective maximum vibration levels specified in Section 14.03 of the Specifications, then at the Owner's option either the Builder shall pay or the Owner may deduct from the Delivery Payment, by way of liquidated damages and not as a penalty, an amount determined as follows:

A. If the maximum vibration level, measured at the primary ship structure (transverse web frames or longitudinal girders) above the propellers exceeds the ISO level of 4 mm/sec [RMS] with the Vessel cruising at 80% MCR output, then for each full 1 mm/sec [RMS] above 4 mm/sec [RMS], the amount of \$20,000;

B. If the maximum vibration level, measured in the specified zones in the accommodation areas (tables etc. not included) exceeds 1.0 mm/sec [RMS] with the Vessel cruising at 80% MCR in any of such specified zones, then for each full 0.5 mm/sec [RMS] above 1.0 mm/sec [RMS] measured in each such zone, the amount of \$20,000;

C. If the maximum vibration level, measured in the specified zones in the accommodation areas (tables etc. not included) exceeds 0.5 mm/sec [RMS] with the Vessel at anchor condition in any of such specified zones, then for each full 0.25 mm/sec [RMS] above 0.5 mm/sec [RMS] measured in each such zone, the amount of \$20,000.

d) The Owner shall be entitled to deduct any liquidated damages specified herein from any amounts owed to the Builder upon delivery and acceptance under the terms of this Agreement. If the amount of the liquidated damages owed by the Builder to the Owner exceeds the amount otherwise owed upon delivery of the Vessel by the Owner to the Builder under the terms of this Agreement, then the Builder shall pay the difference to the Owner at the time of acceptance and delivery of the Vessel.

### Section 19.3 Bonus for Performance Better than Specifications

a) Success in achieving reductions below the warranted maximum levels of any of these Vessel characteristics, as modified by any signed Change Orders, shall result in bonus payments to Builder as follows:

(i) Reduced Weight: If the Measured Weight is less than the Adjusted Guaranteed Weight, then the Owner shall pay the Builder an amount determined as follows:

- A. If the reduction in weight is less than 10 metric tons, no bonus;
- B. If the reduction in weight is at least 10 metric tons but not greater than 15 metric tons, the bonus amount shall be \$100,000 plus an additional \$50,000 for every full metric ton of weight reduction achieved over 10 metric tons;
- C. If the reduction in weight is greater than 15 metric tons, the bonus amount shall be \$350,000 plus an additional \$100,000 for every full metric ton of weight reduction achieved over 15 metric tonnes.

(ii) Reduced Noise: If the noise levels as measured during the Sea Trials are less than the lower number of the two-decibel range specified in Sections 14.01.01 and 14.01.02 of the Specifications for any specified zone, then the Owner shall pay the Builder an amount determined as follows:

- A. If the reduction in any zone is less than 2 decibels, no bonus for that zone;
- B. If the reduction in any one or more zones is 2 decibels or more, then the bonus amount for each such zone shall be \$10,000 plus an additional \$10,000 for every full decibel in excess of 2 decibels below the specified levels in each such specified zone.

(iii) Reduced Vibration: If the respective maximum vibration levels, above 6 Hz, as measured during the Sea Trials in each of the same specified zones in which noise levels are to be measured are less than the respective maximum vibration levels specified in Section 14.03 of the Specifications, then the Owner shall pay Builder an amount determined as follows:

- A. If the maximum vibration level, measured at the primary ship structure (transverse web frames or longitudinal girders) above the propellers is less than the ISO level of 4 mm/sec [RMS] with the Vessel cruising at 80% MCR output, then for each full 1mm/sec [RMS] below 4 mm/sec [RMS], the amount of \$20,000;

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*[Handwritten Signature]*



B. If the maximum vibration level, measured in the specified zones in the accommodation areas (tables etc. not included) is less than 1.0mm/sec [RMS] with the Vessel cruising at 80% MCR in any of such specified zones, then for each full 0.5 mm/sec [RMS] below 1.0 mm/sec [RMS] measured in each such zone, the amount of \$20,000;

C. If the maximum vibration level, measured in the specified zones in the accommodation areas (tables etc. not included) is less than 0.5mm/sec [RMS] with the Vessel at anchor condition in any of such specified zones, then for each full 0.25 mm/sec [RMS] below 0.5 mm/sec [RMS] measured in each such zone, the amount of \$20,000.

#### Section 19.4 Security for Warranty Obligations

a) The Warranty Guarantee Account established and the Escrow Agreement executed pursuant to Section 12.1 shall partially secure the due fulfillment of Builder's warranty obligations under ARTICLE 19. The existence of the Warranty Guarantee Account shall in no way affect Builder's responsibilities and liabilities as provided for in this ARTICLE.

#### ARTICLE 20. DEFAULT ON THE PART OF THE OWNER

a) The Owner shall be deemed to be in default if:

(i) The Owner fails to pay the Builder, or to deposit with the Escrow Agent pursuant to Section 12.2 a) or Section 12.2 b), any amounts due under this Agreement aggregating at least One Hundred Thousand Dollars (\$100,000.00) within thirty (30) days of the due date;

(ii) The Owner is in material breach of any of its other obligations under this Agreement and that breach continues for more than thirty (30) days following receipt by the Owner of a notice from the Builder requesting that the breach be remedied;

(iii) The Owner fails to make any payment required at delivery or to accept and take delivery of the Vessel within thirty (30) days from the date on which it is rendered for delivery without valid grounds pursuant to the term of this Agreement; or

(iv) The Owner becomes bankrupt or goes into liquidation (other than for the purpose of amalgamation or reconstruction) or has a receiver appointed and the trustee, assignee, liquidator or receiver as the case may be fails within sixty (60) calendar days to make arrangements satisfactory to the Builder for continued payment of amounts due under this Agreement.

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b) If the Owner defaults in payment of any amount due under this Agreement within thirty (30) days of the due date then the Owner shall pay interest thereafter on the unpaid amount at the Default Rate until paid. In the event the Owner is in default on payments aggregating at least One Hundred Thousand Dollars (\$100,000.00) the Builder shall be permitted, upon notice to the Owner, to suspend or cease all work on the Vessel until the Owner has paid all amounts then owing, in which case the Delivery Date may be extended as and to the extent provided in Section 13.2 c).

c) If the Owner is deemed to be in default pursuant to ARTICLE 20 a) the Builder may deliver to Owner a written notice detailing the default asserted and notifying the Owner of its intention to terminate this Agreement if such default is not timely cured. If, after giving such notice of default and opportunity to cure, the default continues for more than fifteen (15) days, then, in such event, the Builder may, at its option, terminate this Agreement by serving upon the Owner written notice of termination and upon receipt of that written notice of termination by the Owner, this Agreement shall forthwith terminate. The Builder shall thereafter have full right and power to deal with or dispose of the Vessel and the Equipment provided always that the Builder does so in a commercially reasonable manner, which may include completing and then selling the Vessel, or contracting with a new owner for the completion of the Vessel, or selling the Vessel in its incomplete state.

d) If following termination of this Agreement the Vessel is sold by the Builder, either completed or incomplete, the Builder shall retain from the sale proceeds all costs and expenses directly and reasonably incurred by reason of the Owner's default, plus all amounts in arrears, plus interest at the Default Rate on any amounts in arrears, plus all costs reasonably incurred in the sale of the Vessel not previously or otherwise recovered. If the Builder completes the Vessel before selling it, the Builder shall also be entitled to retain from the sale proceeds an amount equal to the sum of all the additional Milestone Payments that would have come due under this Agreement subsequent to the Owner's default but for the Owner's default. The balance of any proceeds after deduction of the foregoing amounts shall be paid to the Owner. If, notwithstanding a commercially reasonable sale, the sale proceeds shall be insufficient to pay the obligations of the Owner to the Builder in full as provided herein, the Owner shall remain liable to the Builder for any deficiency.

e) In the event of termination by the Builder, in addition to any other rights that the Builder has under this Agreement and/or other rights which may be conferred upon the Builder at law or in equity, the Builder may

- (i) retain the Deposit in full; and
- (ii) sue the Owner for any unpaid damages, including but not limited to all costs, charges, expenses, losses, damages (including lost profit and overhead elements of all payments not paid by the Owner to the Builder).



f) The remedies provided under this ARTICLE 20 are cumulative, not mutually exclusive, and the Builder may exercise, either separately or at the same time, any one, or more, or all of its rights or remedies hereunder, and such exercise shall be without prejudice whatsoever to any other rights it may have under this Agreement or pursuant to law.

#### ARTICLE 21. DEFAULT ON THE PART OF THE BUILDER

a) The Builder shall be deemed to be in default if:

(i) the Builder suspends or ceases Construction of the Vessel for more than thirty (30) days without being expressly entitled to do so on account of any action, omission or default by the Owner pursuant to the terms of this Agreement;

(ii) the Builder refuses or persistently neglects to comply with any reasonable written notice or reasonable instruction that the Owner or Owner's Representative is entitled to give pursuant to the terms of this Agreement, or is in material breach of any other term or terms of this Agreement and the breach continues for more than thirty (30) days following receipt by the Builder of a notice from the Owner requesting that the breach be remedied (except that, if the Builder fails to complete the Vessel within one hundred and twenty (120) calendar days after the Delivery Date, the Owner may declare the Builder in default without providing an opportunity to cure);

(iii) the Builder's lease dated September 11, 2000 with The Bridgeport Port Authority ("Lessor") for the premises on which the Builder's Shipyard is located ("the Shipyard Lease") expires and is not renewed, or is terminated by the Lessor, or the Lessor threatens eviction because the Builder is in material default under such lease; or

(iv) The Builder becomes insolvent or bankrupt or goes into liquidation (other than for the purpose of amalgamation or reconstruction), or the Builder suspends payments or ceases to carry on its business or makes any special arrangement or composition with its creditors, or has a receiver appointed and the trustee, assignee, liquidator or receiver as the case may be fails within sixty (60) calendar days to make arrangements satisfactory to the Owner for continued performance of the Builder's obligations under this Agreement.

b) If a default of the Builder under this ARTICLE occurs, then the Owner may deliver to the Builder a written notice detailing the default asserted and notifying the Builder of its intention to terminate this Agreement if such default is not timely cured. If, after giving such notice of default and opportunity to cure, the default continues for more than fifteen (15) days, then, in such event, the Owner may, at its option, terminate this Agreement by serving upon the Builder written notice of termination and upon receipt of that written notice of termination by the Builder, this Agreement shall forthwith terminate.

c) On termination, the Owner shall be entitled to, at its option -

- (i) take possession of the Vessel and remove it from the Builder's Shipyard for completion elsewhere; or
- (ii) take possession of the Vessel and perform such work with respect to the Vessel at the Builder's Shipyard as the Owner might consider appropriate to complete the Vessel to a stage where it can safely be launched and removed for completion elsewhere; or
- (iii) take possession of the Vessel and sell to a third party,

all without prejudice to any claims for damages that the Owner may have against the Builder.

d) If the Owner elects to take possession of the Vessel as provided in ARTICLE 21 c), the Builder shall provide the Owner and its contractors or subcontractors or employees without charge access to enter and work, at the Owner's expense, at the Builder's Shipyard, and shall make available to them without charge the Builder's facilities, plant, equipment, Travelift, machinery, tools and other things that are owned or leased by or otherwise possessed by the Builder that are necessary or useful for the completion of the Vessel to a stage where it can safely be launched and removed, and for launching and removal of the Vessel. The Builder shall forthwith turn over to the Owner possession of and the Owner may take possession of the Vessel, the Owner Supplied Items, all Equipment and any other items whatsoever acquired for or intended to be incorporated in the Vessel, whether or not marked as required by this Agreement, the Plans, the Specifications, all construction drawings, detail drawings, sketches, the Construction Schedule, technical descriptions, engineering information, calculations, test results or other data or information or documents concerning the design and Construction of the Vessel, whether paper or electronic format, all manuals, guides, instruction books and warranty documentation for all machinery, equipment or other items incorporated or to be incorporated in the Vessel, and any and every other item or thing of any nature whatsoever intended to be incorporated in the Vessel, whether in the possession of the Builder, its Subcontractors or vendors, or whether in transit between any thereof. The Builder shall also fully cooperate with the Owner and any governmental authority to the extent necessary to permit the Vessel to be launched and removed from the Builder's Shipyard to any other shipyard, as the Owner may elect.

e) The Builder shall use its best efforts to furnish to the Owner concurrently with the execution of this Agreement, or as soon thereafter as is possible, a written undertaking from the Lessor to the Owner providing

- (i) that the Lessor will deliver to the Owner, at substantially the same time as it delivers the original to the Builder, a copy of any notice in writing of any default by the Builder under the Shipyard Lease that could result in the eviction of

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the Builder from the leased premises, or in the termination or non-renewal of the Shipyard Lease;

(ii) that the Owner shall have the right, but not the obligation, to cure any default by the Builder under, and to reinstate the Shipyard Lease; and

(iii) that the Lessor will give the Owner thirty (30) days advance notice in writing of the Lessor's intention to terminate or not to renew the Shipyard Lease.

f) If this Agreement is in default and is terminated by the Owner on the grounds of Builder's default under, or the expiration of, or the termination or non-renewal by the Lessor of the Shipyard Lease, then Builder agrees that it will, upon the request of the Owner, cooperate fully with the Owner and Lessor toward achieving the objective of allowing the Owner to lease directly from the Lessor sufficient space and facilities for such time as the Owner may determine, in order to permit the Owner to work on or complete the Vessel to any stage of completion that the Owner may elect. The Builder's cooperation shall include, as applicable, the execution and delivery of any appropriate amendment to the Shipyard Lease (without incurring of additional obligations by the Builder), or a termination and release of the Shipyard Lease, or the execution and delivery of such other documents or instruments and the taking of such other actions as may be necessary or appropriate to permit the Owner to lease adequate space and facilities directly from the Lessor (provided, however, that the Builder shall not be required to incur any additional obligations in connection therewith). Such cooperation shall also include Builder peacefully vacating such space and facilities and/or transferring possession thereof to the Owner, along with the things identified in ARTICLE 21 d).

g) In the event of termination of this Agreement by the Owner, in addition to any other rights that the Owner has under this Agreement and/or other rights which may be conferred upon the Owner at law or in equity, the Owner may

(i) recover from the Warranty Guarantee Account such portion of its damages as may be available from the funds deposited in such account; and

(ii) sue the Builder for any unpaid damages, including but not limited to all costs, charges, expenses, losses, damages (including the profit and overhead elements of all payments paid by the Owner to the Builder), or liabilities (including estimated contingent liabilities) of the Owner relating to the Builder's design and Construction of the Vessel.

h) The remedies provided under this ARTICLE 21 are cumulative, not mutually exclusive, and the Owner may exercise, either separately or at the same time, any one, or more, or all of its rights or remedies hereunder, and such exercise shall be without prejudice whatsoever to any other rights it may have under this Agreement or pursuant to law.

## ARTICLE 22. INSURANCE; INDEMNIFICATION

a) As of the Effective Date and until the delivery the Builder shall cause the Vessel and the Equipment and the Owner Supplied Items to be insured to their full replacement value at any time during construction of the Vessel under a separate Builder's Risks policy or policies covering this Vessel and no other vessels, and underwritten by first class underwriters acceptable to the Owner. The policy(ies) shall be issued in the joint names of the Builder and the Owner as named insureds and loss payees, as their interests may appear. The insurance must cover all risks and liabilities customarily insured against under, and shall be in the form of standard Builder's Risk policies including, without limitation, Workers Compensation, Employer's Liability, Comprehensive General Liability, Strikes, Lockouts and other Labor Stoppages, Hull and Machinery, Protection and Indemnity, and such other risks as may be reasonably requested by the Owner. There shall be a breach of warranty endorsement in favor of the Owner. The insurance policy shall be an "occurrences" policy, not a "claims made" policy. The policy shall cover Owner Supplied Items from the time delivered to the Builder's Shipyard. The policy shall have a deductible of no more than Twenty Five Thousand Dollars (\$25,000.00). The policy must include comprehensive general liability insurance (including crew liabilities insurance) with combined single limits of at least the current value of the Vessel up to Thirty Million Dollars (US \$30,000,000.00) with the Owner named as an additional insured, covering risks associated with the Vessel, and construction of the Vessel, including the associated tests and trials. The Builder shall furnish to Owner copies of all relevant insurance policies and endorsements from time to time in effect, and copies of such policies and endorsements in effect as of the Effective Date of this Agreement shall be attached hereto as Exhibit G.

b) All premiums for the insurance shall be payable by the Builder. The Owner shall have the right, but no obligation, to make any insurance premium payments not made by the Builder, and the right to immediate reimbursement from the Builder or deduction from any remaining installment of the Contract Price for any insurance premium payments made by the Owner. All insurance policies shall require the insurers to give an undertaking that the Owner shall have no liability for premiums, notwithstanding that it is a named assured, and to provide thirty (30) days prior written notice to the Owner of any non-renewals, nonpayment of premiums, cancellation, lapse or modification of any such policy. The Owner shall have the right, but not the obligation to cure.

c) In the event that the Vessel suffers damage by any cause whatsoever prior to Delivery and that damage does not constitute an actual or constructive total loss of the Vessel, the Builder shall repair the damage in accordance with this Agreement, the Specification and the other Standards, and to the satisfaction of the Classification Society and the Owner's Representative. If the damage is covered by the Builder's Risk insurance, all insurance proceeds shall be payable to the Builder and shall be utilized by the Builder exclusively toward the prompt repair and restoration and



Construction of the Vessel in accordance with this Agreement and the Plans and Specifications and the other Standards, and to the satisfaction of the Classification Surveyor and the Owner's Representative (provided that the Builder and the Owner shall first have agreed in writing as to a reasonable extension of the Delivery Date for any delay directly resulting from the partial loss).

d) Nothing in this ARTICLE shall be construed as extending the Delivery Date (unless by express written agreement) or discharging the Builder from any of its duties and liabilities to construct the Vessel strictly in accordance with the requirements of this Agreement, the Plans and Specifications and all other Standards.

e) In the event that the Vessel becomes an actual or constructive total loss within the terms of the Builder's Risks Insurance, the Owner shall be entitled to receive directly from the insurers all insurance proceeds up to an amount (the "Insured Amount") equal to the total of (i) all payments previously made to the Builder, plus (ii) the total delivered and installed costs of all Owner Supplied Items. If for any reason the insurance proceeds are less than the Insured Amount, Builder shall be liable to Owner for any and all shortfall. If the Vessel has become an actual or constructive total loss, Owner, in its sole discretion, may elect either (i) to have the Builder commence within thirty (30) days after Owner's receipt of the Insured Amount construction of a new Vessel for the Owner pursuant to the terms and provisions of this Agreement, with the same Contract Price but with a new mutually agreed Delivery Date, or (ii) to terminate this Agreement, whereupon the Owner shall be relieved of any further obligation to the Builder under this Agreement. Upon payment in full of the Insured Amount to the Owner, title in what remains of the Vessel and the Equipment and the Owner Supplied Items shall be transferred to the Builder, and the Builder will be entitled to retain any balance remaining of the insurance proceeds received or payable in respect of the loss. The Owner shall cooperate in good faith with the transfer of title of the Vessel to the Builder as provided herein.

f) In addition to but not limited to the foregoing provisions contained in this ARTICLE, the Builder shall and does hereby agree to defend, indemnify and hold harmless the Owner and the Vessel against all actions, suits, claims, demands, costs or expenses on account of personal injury, death, or damage to or loss of property arising prior to the delivery of the Vessel to the Owner, in the course of Builder's performance of its obligations under this Agreement, except to the extent of the Owner's negligence or the negligence of the Owner's employees, representatives, agents, or subcontractors. This indemnification shall extend to any action on the part of any Federal or State Government or Municipal Authorities, or otherwise, caused by any pollution of land, waters, bay, harbor, river or tributary including by oil or fuel spillage or refuse discharged from the Vessel, at any time prior to delivery. The Builder shall procure insurance under "occurrence" policies and not under "claims made" policies with insurers and in amounts approved by the Owner, and in the names of the Builder and the Owner as their respective rights and interests may appear, whereby the Owner and

the Builder are indemnified against liability in respect of the matters referred to in this ARTICLE 22 f).

g) The Builder shall notify the Owner within five (5) Business Days of any damages to the Vessel or to the Equipment or to the Owner Supplied Items, and/or any claims made.

#### ARTICLE 23. TAXES, DUTIES, AND CONTRACT EXPENSES

a) Builder shall pay all local, state, and federal taxes, workers' compensation, social security or old age benefits of any nature, unemployment tax, and any other similar taxes, charges, assessments and contributions of any kind now or hereafter payable in connection with the Construction of the Vessel imposed upon, or with respect to, or measured by, materials and labor utilized in the Construction of the Vessel hereunder, or the wages, salaries or other remunerations paid to persons employed in connection with the performance of the Agreement, and Builder shall indemnify and hold Owner harmless from any and all liability and expense by reason of Builder's failure to pay such taxes, charges, assessments and contributions.

b) Owner agrees to pay, or to the extent Builder is required to pay, to indemnify Builder for the payments of, any sales taxes or similar fees, duties or charges arising from or in connection with the sale of the Vessel and the transactions contemplated by this Agreement. The Builder shall use its best efforts, however, to assist the Owner in achieving exemption from any such taxes, as provided under ARTICLE 10 a), to the extent permitted by applicable laws and regulations.

#### ARTICLE 24. NOTICE AND COMMUNICATION

a) Any notice to be given to the Builder under the terms of the Agreement shall be served in writing in the English language (by fax or e-mail confirmed by letter, or by registered mail, or delivered against receipt) at the following address, unless otherwise notified in writing by the Builder:

Derecktor Shipyards Corp., LLC  
837 Seaview Drive  
Bridgeport, Connecticut 06607  
Attn: Mr. Paul Derecktor

Phone: 203-336-0106  
Fax: 203-362-1464  
e-mail: Pauld@derecktor.com

*Paul*  
*[Signature]*

With a copy to:

Bigeon H. Grossman & Schole LLP  
370 Lexington Avenue  
New York, New York 10017  
Attn: Barry Grossman, Esq.

Phone: 212-370-1300  
Fax: 212-370-7889  
Email: bigonh@bgsllp.com

b) Any notice to be given to the Owner under the terms of the Agreement shall be served in writing in the English language (by fax or e-mail confirmed by letter, or by registered mail, or delivered against receipt) at the following address, unless otherwise notified in writing by the Owner:

Gemini II LTD.  
Cayman Business Park, A7,  
P.O. Box 10300 APO,  
Grand Cayman,  
Cayman Islands

With copies to:

Anthony Marlon  
9025 Greenbush Lane  
Las Vegas, Nevada 89134

Phone: 702-242-7180  
Fax: 702-242-7915  
E-mail: ceo104@sierrahhealth.com

and to

Lars Forsberg, Esq.  
Holland & Knight LLP  
195 Broadway, 24<sup>th</sup> Floor  
New York, NY 10007

Phone: 212-513-3316  
Fax 212-385-9010  
E-mail: lars.forsberg@hklaw.com

*[Handwritten initials]*  
*[Handwritten initials]*

#### ARTICLE 25. CONTRACT DOCUMENTS

a) In the event of any inconsistencies among the Vessel Construction Agreement, the Plans, the Specifications, and the Equipment List, the following is the governing order of such contract documents;

- (i) the Vessel Construction Agreement;
- (ii) the Specifications;
- (iii) the Plans;
- (iv) the Equipment List.

ARTICLE 25 is effective through the life of this Agreement unless otherwise noted in writing.

#### ARTICLE 26. ASSIGNMENT

The Builder may not, without the express written consent of the Owner, assign its rights under this Agreement or any part thereof or any benefit or interest therein or thereunder, and any attempted or purported assignment will be null and void. The Owner shall have the right to assign any of its rights under this Agreement and shall notify the Builder in writing of any such assignment within a reasonable time after any such assignment. Any such assignment by the Owner shall not relieve the Owner of its obligations under this Agreement, unless the Builder otherwise agrees in writing.

#### ARTICLE 27. SETTLEMENT OF DISPUTES

a) Any disputes between the Builder and the Owner arising from this Agreement shall be resolved in accordance with this ARTICLE 27. As a first resort, the parties or duly empowered representatives shall meet in person to attempt to amicably negotiate and resolve the dispute. Failing amicable resolution, the parties may thereafter mutually seek to resolve the dispute by mediation. Mediation is not mandatory, however, and either party may instead initiate arbitration in accordance with remaining provisions of this ARTICLE.

b) If any question or difference shall arise between the parties as to the meaning of, or the rights or obligations of the parties in relation to any technical requirements or technical provisions of this Agreement (including, but without limiting the generality of the foregoing, disputes as to whether the Vessel suffers from any defect and/or complies with the Agreement when tendered for delivery), at the written request of either party, the same may be referred to a mutually acceptable independent marine professional, whose decision shall be binding. Alternatively, the parties may by mutual agreement refer the matter to the senior surveyor of the Classification Society at New York, NY, for his interpretation and decision, in which case his decision shall be binding.



c) In the event the question or difference is other than of a technical nature, or if the parties cannot agree whether a particular question or difference is of a technical nature suitable for decision under ARTICLE 27 b) above or cannot agree on a person to whom it should be referred, or if the senior surveyor of the Classification Society declines to decide the issue, then the dispute shall be referred to arbitration pursuant to ARTICLE 27 d) below.

d) Any question or difference between the parties not resolved pursuant to either ARTICLE 27 a) or ARTICLE 27 b) above shall be resolved by either a mutually acceptable sole arbitrator, or if the parties cannot agree on a single arbitrator, by a panel of three neutral arbitrators, one appointed by each of the parties and the third chosen by the two appointed by the parties. The arbitrations shall be held in accordance with the rules of procedure of the Society of Maritime Arbitrators, and applying United States Maritime Law as the substantive law. This arbitration proceeding shall be conducted in the English language at New York, New York, or at such other location as the parties may mutually agree, and the parties shall be entitled to be represented in the arbitration by counsel of their choosing.

e) Either party may initiate arbitration under ARTICLE 27 d) by sending written notice to the other of election of the right of arbitration and specifying the dispute to be arbitrated.

f) The dispute shall be referred to a sole arbitrator if the Owner and Builder agree upon one arbitrator within ten (10) calendar days after receipt of the notice of dispute. If a sole arbitrator is not so appointed, then within five (5) calendar days thereafter, the Builder and the Owner shall each appoint an arbitrator and within five (5) calendar days thereafter the two appointed arbitrators shall jointly appoint an umpire.

g) If one party fails to appoint an arbitrator within the period of five (5) calendar days, an arbitrator shall be appointed for it by the Society of Maritime Arbitrators. If neither party appoints an arbitrator within the five (5) calendar days, then the notice shall be deemed to have lapsed. References in this ARTICLE to "the arbitrator" shall include, where appropriate, two arbitrators and the umpire.

h) The arbitrator or arbitrators shall have full power to review and rule upon any issues arising out of or relating to this Agreement. The parties and the arbitrators shall use their best efforts to complete the arbitration within thirty days. The arbitrators' decision shall be given in a written award together with the reasons for their decision.

i) The award in the arbitration shall be final and binding on the parties.

j) The arbitration panel shall have authority to award reasonable attorneys fees.

k) No party shall be considered in default hereunder during the pendency of arbitration proceedings relating to a disputed default, and if found in default by the arbitration panel, shall be given ten (10) Business Days from receipt of the arbitration



award to cure such default. The pendency of arbitration proceedings shall not justify extension of the Delivery Date unless (i) the Builder prevails, and (ii) the arbitration panel, at the Builder's request, finds that an extension is justified, and then only for the number of days the arbitration panel so determines.

#### ARTICLE 28. INVALIDITY

If any term or terms contained in this Agreement shall be void, illegal or unenforceable in any respect under the applicable law, the remaining terms shall remain valid, legal and enforceable and shall not in any way be affected or limited by that invalidity.

#### ARTICLE 29. CONFIDENTIALITY

a) The Builder and the Owner shall keep the terms and conditions of this Agreement, including, without limitation, the Contract Price, in strict confidence and therefore shall disclose no information concerning this Agreement to any outside party save as required by law or as permitted in writing by the Owner. Any publicity relating to this Agreement or to the project contemplated by this Agreement or to the Vessel and that is initiated by or that in any way involves the Builder must be approved in advance by the Owner, in writing, except as otherwise provided in ARTICLE 31 a). The Owner may, in its absolute discretion, decline to permit any such publicity (except as otherwise provided in ARTICLE 31 a)).

b) The Builder shall not disclose the identity of the Owner or the Owner's principal or any member of Owner's family for any purpose, including, without limitation, promotion or marketing of Builder's products.

c) Further, each Party shall cause any director, officer, employee or agent involved with this transaction to agree to do the same.


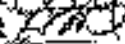
d) The Owner shall not release into the public domain any photographs of the Vessel under construction without the prior written consent of the Builder, which consent shall not unreasonably be withheld.

e) The foregoing restrictions, however, shall not apply to disclosures made: (a) to employees or professionals requiring such information to assist the transaction, to maintain books and records, or to prepare tax returns, or (b) to comply with subpoenas or discovery requests issued within any legal proceedings or (c) of publicly available information.

f) If the Builder breaches the requirements of this ARTICLE, it shall be liable to the Owner and the Owner's principal (who shall be deemed a third party beneficiary of this ARTICLE) for any resulting loss, damage, or other consequences of its actions.

#### ARTICLE 30. EFFECTIVE DATE

This Agreement becomes effective when it is signed by both the Owner and the Builder.

INITIALS OF OWNER   
INITIALS OF BUILDER 

## ARTICLE 31. GENERAL

a) Demonstration. The Owner (without being required to disclose his identity) shall permit the Builder, on the giving of reasonable prior notice, to publish pictures and a brochure of the completed Vessel for advertising purposes. The Builder shall coordinate with the Owner to ensure that the Builder's access to the Vessel does not interfere with the Owner's use and enjoyment of the Vessel.

b) Governing Law. This Agreement shall be governed by and construed in accordance with the substantive laws of the State of New York.

c) Submission to Jurisdiction. Failing voluntary submission to arbitration, any action, suit, demand or proceeding instituted shall be instituted and litigated within the jurisdiction of the federal or state courts located in New York, New York solely to compel arbitration, and each of the parties, by the execution of this Agreement, hereby consents and submits to the exclusive jurisdiction of the federal or state courts located in New York for that limited purpose. Neither party shall raise as a defense to any action, suit, demand or proceedings to compel arbitration which is initiated in any forum as provided above the lack of jurisdiction of the courts of such forum over the person of each party for that limited purpose.

d) Lien. The Builder shall have the right of possession of the Vessel and property owned by the Owner in the Builder's possession, custody or control, for the whole or part as the case may be, of any and all amounts due and owing to the Builder and outstanding at any time from the Owner under or in connection with this Agreement up to the time the Protocol of Delivery and Acceptance is signed. Builder shall have the right to file UCC-1 financing statements against the Owner covering the Vessel, to the extent of such indebtedness, without the further consent or the signature of the Owner.

e) Limitation of Liability. In no event, whether based upon contract, tort, warranty, or otherwise, shall Owner or Builder be liable for or obligated in any manner to pay special, consequential, punitive, incidental, indirect or similar damages for any reason in connection with this Agreement and the transactions contemplated hereby except as otherwise set forth in this Agreement. Both the Builder's and the Owner's obligations hereunder shall be limited to those expressly set out and assumed by Owner and Builder, respectively, under this Agreement.

f) Broker Claims. The Builder and the Owner each represent to the other that there is no broker claiming through it who is entitled to any brokerage commission in connection with this Agreement.

g) Further Assurances. Each party shall sign all such documents and do all such things as may be necessary or desirable to give full effect to this Agreement.

h) Entire Agreement. This Agreement shall constitute the entire agreement between the parties and shall supersede all previous negotiations and all other writings.

on the subject of the work covered hereby (except as to the Plans and Specifications which may be modified by oral agreement) and shall not be affected or modified by any oral agreement.

i) Modifications: No modification, change orders or amendment of this Agreement shall be of any force or effect unless the same is in writing and signed by all parties and otherwise is effected in accordance with the provisions of this Agreement.

j) Time for Performance: The parties agree that the time frames and time limits established in this Agreement for the performance of their respective obligations are reasonable periods for performance of those obligations, are material terms of this Agreement, and the parties intend to be bound thereby.

k) Denomination in United States Dollars: All monetary amounts provided for in this Agreement shall refer to United States Dollars.

#### ARTICLE 32. INTELLECTUAL PROPERTY

a) Whether or not any components of the Vessel may bear the patent number, trademarks, or trade names of the manufacturers, nothing in this Agreement or the Specifications and any addenda (Exhibit A), or the Plans and any addenda (Exhibit B), which are incorporated herein and made part of this Agreement, shall be construed as transferring any patent, trademarks, or trade names of the manufacturers and nothing in this Agreement or the Specifications and any addenda (Exhibit A), or the Plans and any addenda (Exhibit B), shall be construed as transferring any patent, trademark, trade name, or copyrights from the true and lawful owners thereof.

b) The Builder shall defend, indemnify and hold the Owner harmless against any liabilities of the Owner arising out of any infringement of patent or design in respect of the use of designs, plans, drawings or Specifications supplied by the Builder in connection with the Construction of the Vessel under this Agreement (but only if any such infringing designs, plans, drawings or Specifications supplied by the Builder was not produced or done pursuant to the specific directions, instructions or requests of the Owner, the Naval Architect, the Interior Designer, the Marine Engineer, the Owner's Representative or any other persons engaged by the Owner), and the Owner shall promptly give to the Builder notice of any such claims brought against the Owner and provide such assistance to the Builder in defending any such claims as is reasonably required, including but not limited to allowing the Builder to defend any such claims in the Owner's name but at the cost and expense of the Builder.

c) The Builder shall respect the intellectual property rights of any third parties with whom it is in privity, and in addition, the intellectual property rights of the Naval Architect, the Interior Designer, and the Marine Engineer.

d) The Builder acknowledges that, except as otherwise provided in this Agreement, (i) the Plans, the Specifications, engineering calculations and any other

*[Handwritten signature]*  
*[Handwritten signature]*



intellectual and proprietary property used or furnished to the Builder for use in connection with the Construction, testing and delivery of the Vessel shall be and remain the exclusive property of the Owner, or its licensors, as the case may be; (ii) except with the express written consent of the Owner, the Builder does not have the right to use the Plans, Specifications, engineering calculations and any other intellectual and proprietary property used or furnished to the Builder for use in connection with the Construction, testing and delivery of the Vessel for the construction of any other vessel; (iii) except with the express written consent of the Owner, the Builder does not have the right to sell, assign, license or sub-license any rights, interests and uses in and to the Plans, Specifications, engineering calculations and any other intellectual and proprietary property used or furnished to the Builder for use in connection with the Construction, testing and delivery of the Vessel to any third party; and (iv) except with the express written consent of the Owner, the Builder shall not have the right to reproduce, distribute or disclose, in whole or in part, the Plans, Specifications, engineering calculations and any other intellectual and proprietary property used or furnished to the Builder for use in connection with the construction, testing and delivery of the Vessel.

e) Notwithstanding the provisions of ARTICLE 32 d), Builder shall have the right to use the Plans, Specifications, engineering calculations and any other intellectual and proprietary property exclusively in connection with the Construction, testing and delivery of the Vessel.

f) The Owner and Builder acknowledge that: (i) the engineering calculations, construction drawings, and any other intellectual and proprietary property furnished by the Builder for use in connection with the Construction, testing and delivery of the Vessel shall be and remain the property of the Builder, the Owner however being hereby granted an exclusive license in the same; (ii) except with the express written consent of the Builder, the Owner does not have the right to use such engineering calculations, construction drawings, and any other intellectual and proprietary property furnished by the Builder for use in connection with the Construction, testing and delivery of the Vessel for the construction of any other vessel; (iii) except with the express written consent of the Builder, the Owner does not have the right to sell, assign, license or sub-license any rights, interests and uses in and to the engineering calculations, construction drawings, and any other intellectual and proprietary property furnished by the Builder for use in connection with the Construction, testing and delivery of the Vessel to any third party other than a charterer or buyer or other transferee of the Vessel, subject to the restrictions set forth herein; and (iv) except with the express written consent of the Builder, the Owner shall not have the right to reproduce, distribute or disclose, in whole or in part, to third parties, the engineering calculations, construction drawings, and any other intellectual and proprietary property furnished by the Builder for use in connection with the construction, testing and delivery of the Vessel, except to the extent needed by the Owner or by a charterer or buyer or other transferee of the Vessel in connection with the use, maintenance, repair, charter or sale of the Vessel, subject to the restrictions set forth herein.





g) Notwithstanding the provisions of ARTICLE 32 f), Owner shall have the right to use the engineering calculations, construction drawings, and any other intellectual and proprietary property furnished by the Builder in connection with the Construction, testing and delivery of the Vessel as needed by the Owner in connection with its use, maintenance, repair, charter or sale of the Vessel, and the Owner shall have the right to transfer such rights in whole or in part to any charterer or buyer or other transferee of the Vessel for the same uses, subject to the restrictions set forth herein.

#### ARTICLE 33. ATTORNEYS FEES AND COSTS

In any arbitration or other legal proceedings initiated by any party to this Agreement arising out of or relating to any question, difference or dispute under, or any alleged breach of this Agreement, or in any legal proceeding to enforce or realize upon any arbitration award, the prevailing party shall be entitled to recover from the other party all attorneys' fees and expenses reasonably incurred by the prevailing party in determining, protecting or enforcing its rights, including, without limitation, those incurred in connection with arbitration proceedings, or in connection with proceedings in any trial court, on any appeal, in any bankruptcy or other such proceeding, and in any post-award or post-judgment litigation to collect upon or otherwise enforce an arbitration award or a court judgment.

#### ARTICLE 34. REPRESENTATIONS AND WARRANTIES

a) Builder makes the following representations and warranties to Owner on and as of the date hereof:

(i) Builder is a limited liability company duly organized, validly existing and in good standing under the laws of the State of Delaware and has the requisite corporate power and authority to enter into and perform its obligations under this Agreement; and

(ii) This Agreement has been duly executed and delivered by Builder and does constitute the legal, valid and binding obligations of Builder enforceable against Builder in accordance with its terms, subject to the effect of bankruptcy, insolvency, reorganization, receivership, moratorium and other similar laws affecting the rights and remedies of creditors generally and subject to the effect of general principles of equity, whether applied by a court of law or equity; and

(iii) There are no legal or governmental actions, suits or proceedings pending or, to the actual knowledge of Builder, threatened against Builder before any court, administrative agency or tribunal which, if determined adversely to Builder, could reasonably be expected to affect the ability of Builder to perform its obligations under this Agreement.

b) Owner makes the following representations and warranties to Builder on and as of the date hereof:

(i) Owner is a company duly organized, validly existing and in good standing under the laws of the Cayman Islands and has the requisite power and authority to enter into and perform its obligations under this Agreement; and

(ii) This Agreement has been duly executed and delivered by Owner and does constitute the legal, valid and binding obligations of Owner enforceable against Owner in accordance with its terms, subject to the effect of bankruptcy and other similar laws affecting the rights and remedies of creditors generally and subject to the effect of general principles of equity, whether applied by a court of law or equity; and

(iii) There are no legal or governmental actions, suits or proceedings pending or, to the actual knowledge of Owner, threatened against Owner before any court, administrative agency or tribunal which, if determined adversely to Owner, could reasonably be expected to affect the ability of Owner to perform his obligations under this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be signed, personally or by their duly authorized representatives with due written authority, and their seals are hereto affixed as of the date(s) indicated below.

EXECUTED as an agreement:

For the Builder:

DERECTOR SHIPYARDS CONN., LLC

By: [Signature]

H. Paul Deroctor

Title: President of the Board of Managers

Date: 7/14/05

For the Owner:

GEMINI LTD.

By: [Signature]

Title: Pres

Date: 6/30/05

8-2465375\_v17

INITIALS OF OWNER  
INITIALS OF BUILDER

[Signature]  
[Signature]

**AMENDMENT NO. 1  
TO YACHT CONSTRUCTION AGREEMENT**

WHEREAS, Gemini II Ltd., a Cayman Islands company ("Owner") and Derecktor Shipyards Conn., LLC ("Builder") are parties to that certain Yacht Construction Agreement dated as of June 30, 2005 (the "Agreement") pursuant to which Builder is undertaking the construction of a 145' custom sailing yacht for Owner; and

WHEREAS, the completion of the Exhibits to the Agreement and execution of the Agreement by Builder were delayed for a period of time after the Agreement had been executed by Owner; and

WHEREAS, as a consequence of such delay Builder requested Owner to agree to a nine day extension of the "Delivery Date" and to a corresponding modification of the definition of the term "Delivery Date" as used in the Agreement; and

WHEREAS, Owner has agreed to an extension and modification to the extent set forth below;

NOW, THEREFORE, Owner and Builder hereby agree as follows:

1. The original language of Article 2 v) on page 3 of the Agreement is hereby deleted in its entirety and replaced with the following language:

v) "Delivery Date" means November 30, 2007, or such earlier or later date as may be provided in a Change Order, or as may be calculated in accordance with any provisions of this Agreement expressly providing for extending or shortening such date, or such other date as the parties may agree in writing."

2. Except to the extent expressly modified by this Amendment No. 1, all other terms and conditions of the Agreement remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment No. 1 to Yacht Construction Agreement to be effective as of July 15, 2008.

**BUILDER:**

DEREKTOR SHIPYARDS CONN., LLC

By: \_\_\_\_\_

Title: \_\_\_\_\_

**OWNER:**

GEMINI II LTD.

By: \_\_\_\_\_

Title: \_\_\_\_\_

John M. Toriello  
Patrick J. Sweeney  
David R. Brand  
HOLLAND & KNIGHT LLP  
195 Broadway  
New York, New York 10007  
(212) 513-3200

Attorneys for Plaintiff  
Geminii Ltd.

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

-----  
GEMINII LTD.,

08 Civ. 6354 (LAP)

Plaintiff,

.. against -

DERECKTOR SHIPYARDS CONN., LLC,

Defendant.  
-----

**EXHIBIT 3 TO BLADEN DECLARATION**



# **EXHIBIT 3**

GEMINI Project Contract Specifications

Van Peteghem &amp; Lauriot Prévost Naval Architects

**CONTENTS OF THE SPECIFICATIONS**

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**01 GENERAL CONDITIONS**

This specification is for the construction of a 145' catamaran sailing yacht according to plans and specifications dated April 28, 2005. It is the intent of this design and specification to construct a super yacht to the highest standards of construction and outfitting.

The yacht is intended for private use and charter (commercial use) and is intended for year round, worldwide cruising, all seas excluding ice, with trans-oceanic capability. The yacht is to be finished and delivered with the following certificates:

1. Bureau Veritas Rules for the Classification of Yachts :  
# FULL + MACH
2. MCA; 512 passengers; 5500 GT
3. Cargo Ship Safety Certificate
4. MARPOL Annex I, IV, V and others as required (SOPRP review by Class)
5. International Load Line Certificate (ILLC 1966)
6. International Tonnage Certificate (ITC 1969)
7. Letter of Compliance for Minimum Safe Manning
8. Panama Tonnage Certificate

All certifications and regulations are to be current at the time of delivery to the Owner.

The Builder will assist the Owner in establishing the ISM Safety Management certificate and Certificate of Registry.

**01.01 Contacts & Legal Address**

Project Name:	Gemini Project
Naval Architect:	Van Peteghem & Lauriot Prévost Yacht Design 11 Blvd Bonaparte 75004 Paris, France email : genniv@vpdp.com
Marine Engineer:	Taylor Marine Services, Inc. Harvard, MA 01451 USA Email: taylormarine@charter.net
Interior Designer:	Michael Leach Design London, UK

**01.02 Principal Characteristics**

Flag State:	Cayman Islands
Hull material:	Aluminium
Hull form:	Catamaran
Length over all:	44.2m
Length water line:	40.8m
Molded Breadth:	16.6m
Molded Depth:	1.7m
Draft:	2.8m
Sail area:	848m <sup>2</sup> (up-wind) / 1112m <sup>2</sup> (reaching)
ITC 1969 tonnage:	499T
Light Ship Displacement:	210T
Fuel Capacity:	30365 liters

GENERAL Project Contract Specifications

Van Peteghem &amp; Lemerle Prévost Naval Architects

Water Capacity:	8500 liters
Anchoring Systems:	Classed
Subdivision:	ten (10) watertight compartments
Decks:	Three (3) ; cabin deck hulls, main deck, upper deck
Propulsion:	Two (2) Caterpillar ; model : C-12 ; rated : "C" 454 hp @ 2100 rpm
Generators:	Three (3) Northern Lights; model: MP445D; rated: 40 kW; 208/3/60

01.02.01 Units

Units used in this specification:

1 meter = 3.281 feet  
 25.4 mm = 1 inch  
 1 tonne = 1000 kg = approx. 2200 lbs  
 1 liter = 0.265 US gallons

01.02.02 Dimensional Tolerances

Full alignment and dimensions are to be monitored during the construction period. The following structural tolerances will be followed:

Hull Length:	$\pm 4.2$ mm	(1.75")
Bowditch:	-0, + 25 mm	(-0", +1")
Depth:	$\pm 25$ mm	( $\pm 1"$ )
Frame spacing:	$\pm 5$ mm	( $\pm 3/16"$ )
Deck heights:	$\pm 6$ mm	( $\pm 1/4"$ )
Longitudinals:	$\pm 5$ mm	( $\pm 3/16"$ )
Bulkheads:	$\pm 5$ mm	( $\pm 3/16"$ )
Shell deflection:	- 3 mm, +0 mm	(before use of filler)
Hull vertical alignment:	$\pm 35$ mm	(1.4")
Hull parallel:	$\pm 25$ mm	(1")
Keel-Steer Diagonals:	$\pm 45$ mm	(1.75")

01.03 Plans and Specifications

It is the intent or spirit of this specification and the plans to construct and furnish a yacht complete and outfitted in every respect and ready for her intended service. All articles of equipment to be furnished by the Owner shall be specifically mentioned herein, and, if not specifically mentioned, are assumed to be included. Omissions from the plans or specifications, or both, of any items, which according to the generally accepted practice, are necessary for the proper operation of the yacht, shall not release the Builder from supplying same.

In all cases where discrepancies exist between the specifications, schematic plans and the contract, the contract shall govern, followed, in order, by the specifications, plans and schematics.

The plans and specifications are intended to be consistent and in harmony, and any work called for in the plans and not in the specifications, or vice-versa, are to be executed as though mentioned in both.

All plans and specifications are to remain the property of the Owner or Architect.

01.04 Builder's Responsibilities



The Builder will be responsible in all aspects to construct the vessel in accordance with these specifications and design as put forward by the Architects and as represented by this specification and the Architect supplied drawings.

It shall be the responsibility of the Builder to carefully check purchase orders, and also to check all materials delivered, to ensure conformity with the details of the specifications and with all normal working requirements, including installations within the available space.

The Builder shall accept his obligation to review all specifications, plans, schematics, arrangements and Details, collectively the Details, submitted by the Architect and to accept responsibility for the proper construction of the yacht, as though same were of the Builder's own design. Unless the aforementioned details have been rejected in writing, the Builder is required to proceed with the work as set forth in the details.

#### 01.04.01 Specifications Intent

These specifications are for tendering and construction purposes. Principal items, such as systems, equipment and machinery, have been specified for life cycle, weight and performance criteria. Specified items are intended to be restrictive rather than descriptive, and are of the type and grade of articles that will be satisfactory. If the Builder proposes alternative equipment, the weight, life cycle, performance criteria and cost differences will be specified in the tender.

Where the phrase "or equal" is used in these specifications, the Builder may propose alternative equipment based upon life cycle, weight and performance criteria. If the Builder proposed alternative equipment, it is required that the weight, life cycle, performance criteria and cost differences be provided in the tender.

#### 01.04.02 Weight Control

Of prime importance for a multihull sailing vessel is minimizing weight as this criteria is a critical factor affecting performance. Under such circumstances, the Builder will propose a weight control program to monitor the weight of the construction.

As newer, stronger and lighter materials are developed after the specifications have been written, and as the build proceeds, the Builder may propose alternative materials to the specified materials, and the impact on weight and cost for the Architect and owner to review.

The Architect may propose alternative materials to the specified materials. In this instance, the Builder will provide its impact on weight and cost. In all circumstances, the Architect and owner will have final choice of materials. Please see: 01.04.04 Alterations & Extras.

#### 01.04.03 Weight Calculations

Before the final Lines Plan is completed, the Architect will hand over the total weight calculation to the Builder for approval. The Builder will check the weight calculation made by the Architect. The total displacement will be calculated in the following condition "fully loaded, 1/2 tanks".

The Builder shall be responsible for meeting the weight calculations and shall institute a weight monitoring procedure and track weights.

The Builder will propose a weight monitoring procedure plan for Evaluation. Such a procedure should include weighing of every thing that goes on and off the vessel, and periodic weighing of the entire structure for both weight and LCG. The Builder must submit 'real time' weights to the Architect for review on a modify basis.

Complete vessel including:

- \* Mast and boom
- \* Standing/running rigging
- \* Sails: mainsail, foresail, jib, staysail, sail covers
- \* Spinnaker
- \* Furler
- \* Upholstery
- \* Hull cover
- \* Safety equipment
- \* Owner furnished items listed in part 16.02

#### 01.04.04 Construction Process

The Architect will be consulted regarding any and all recommended substitutions and he will be asked to confirm that there will be no sacrifice in quality, additional weight, or performance. However, in all cases, it is understood that the final decision and authority to the Builder will remain with the Owner's Representative. Changes from the items listed by trade name shall be made only with the approval in writing from the Owner's Representative. This condition is to have effect whether or not such terms as "or equal" are used.

Where no specific supplier has been named, the Builder is to select more than one supplier for the equipment, and being satisfied that the equipment meets the requirements of the details, is to obtain Owner's Representative approval before purchasing and installing equipment.

The Builder is to review all plans, drawings, subcontractor parts and specifications to satisfy the Builder that the intended objectives and requirements will be achieved.

Specific items where required by the Classification Society, such as main hull materials and machinery are to have test certificates issued by relevant manufacturer and inspecting authorities, where applicable. All original and one certified copy of all certificates are to be provided to the Owner's Representative.

All post contract costs of testing, certification, Classification expenses, including Man Approval, Surveys, Trim and Stability Calculations, Freeboard and Tonnage Measurements, Dock and Sea Trials are to be included in the Price unless alternative contractual arrangements have been made.

#### 01.04.05 Alterations & Extras

Should the Owner deem it necessary or advisable during the course of construction to make changes in the layout or details, so long as the general style and type of the Yacht and it's arrangements are maintained, such changes are to be made by the Builder without invalidating the contract and without adding expense, provided these alterations are determined before the particular part of the work to which they refer is commenced.

#### 01.05 Materials and Workmanship

The Builder shall make all efforts to minimize weight of materials and components in the project.

The Builder shall guarantee skilled workmanship, in keeping with the best yacht construction practice, and in conformity with the plans and specifications as approved in writing by the Owner's Representative. During construction, any work or materials found defective or

unsuitable by the Owner's Representative shall be removed and replaced without extra charge, regardless of the stage of construction.

All materials and manufactured articles furnished by the Builder shall be suitable for marine installation and shall be of the best quality for their respective purpose.

It shall be the responsibility of the Builder to carefully check purchase orders, and also to check all materials delivered, to ensure conformity with the details of the specifications and with all normal working requirements, including installations within the available space.

The selection of fastenings shall be Allen head or square head fasteners. Fasteners will be high-grade stainless steel, or other material with galvanic compatibility to be considered.

#### 01.06 Owner Furnished Items

Inventory items listed in part 16.02 will be owner supplied items.

#### 01.07 Mock-ups

The Builder will cost separately, provide a space and construct mock-ups of the following areas:

- Anchor arrangements (1/4 scale)
- Salon and flybridge deck steering stations
- Salon and aft deck
- TV lounge
- Owner's suite
- One (1) guest cabin
- Galley
- Dive compartment (port lazarette)
- Tender compartment

#### 01.08 Offices, Access & Inspection

The Owner and his authorized representatives shall have access to the vessel and everything pertaining to the vessel at all reasonable times. The Builder will do its utmost to facilitate the work of the inspectors. The Builder shall provide all normal assistance and materials necessary for the purpose of inspection.

The Builder will provide office facilities and space for the Owner's Representatives. This shall include:

- Access for a minimum of 1 telephone lines
- High speed internet access cable (independent of yard)
- Offices for: Project manager/Owner's representative
- Meeting room access

Additional requirements for video support for monitoring of construction will be made available.

#### 01.09 Protection during construction

The Builder will use its best efforts (to)protect all work and owner supplied items at all times and be responsible for and make good any and all damage from whatever cause, to any part of

the vessel or its equipment or furnishings, whether supplied by itself or by the Owner. All items are to be marked for the Project upon arrival, weighed and put in secure storage.

The vessel shall be built at the Builder's yard under a permanent roof with suitable climate control, and will be delivered as per terms of the Contract.

The Builder shall maintain adequate insurance to cover both first party and third party claims, naming the Owner and Owner's Representatives as further and additional insured's and loss payees.

#### 01.10 Accessibility for workmanship and cleaning

Convenient access to compartments for cleaning out and maintenance shall be provided to all parts of the vessel. Flooring throughout shall be fitted with suitable access hatches.

Convenient access to the engines, steering gear and all other equipment shall be provided. Care shall be taken in locating pipes and other parts to avoid blocking of access. If necessary, removable sections shall be utilized.

#### 01.11 Lifting

The Architect will supply a 3D model to the builder. The builder will be responsible for the lifting and nesting.

#### 01.12 Plans

##### 01.12.01 Contract Plans

The following plans are delivered as the contract plans:

- Freeboard drawings
- Safety plan - Profile
- General arrangement - Cabin deck
- General arrangement - Main deck
- General arrangement - Flybridge
- General arrangement - Longitudinal sections
- General arrangement - Transverse sections
- Deck plan
- Flybridge detail arrangement
- Sail plan
- Longitudinal and transverse forward beams
- Stanchions & railings
- Tender compartment & launching principle
- Platform arrangement
- Starboard transverse arrangement
- Aft passerelle geometry operation
- Side passerelle
- Deck hatches and lockers
- Anchoring arrangements
- Mooring arrangements
- Thrusters arrangement
- Systems layout
- Hull portlights
- Preliminary engine room arrangement
- Tanks layout and geometry

- Color renderings
- Fire, noise, vibration and insulation package by SilentLine BV

#### 01.12.02 General Plans & Documents

The Architect will supply drawings and studies including, but not limited to:

- Hull lines plan
- 3D model
- Hydrostatics
- Stability report approved by class society
- Weight studies
- Rudder geometry
- Mast plans
- Rigging plan & rig loads
- Chainsplakes geometry and details
- Stanchions / railing details
- Cove strips & painting details
- Bridge & helm stations layout

As a rule, the Architect will provide concepts, geometry, functionality and collection of items but will not provide construction drawings or detailed drawings. These will be the responsibility of the Builder.

A detailed list of drawings will be produced between the Architect and the Builder specifying which party is responsible for their production prior to contract signature.

#### 01.12.03 Interior Plans

Prior to contract signing, the following plans will be agreed between the Owner and the interior architect design and decoration team:

- General Arrangement
- Overhead and window
- Owner's suite
- VIP cabin
- Guest cabins and bathrooms
- Crew cabins and bathrooms
- Galley
- Crew mess
- Corridors
- Main deck salon and dining area
- Lower salon
- Wheelhouse
- Interior furniture details
- Special fixed feature
- General overhead plans
- Lighting arrangements
- Cabin perspective
- Longitudinal sections for each room or area
- Transverse sections for each room or area
- Elevation for each room or area



As a rule, the interior architect, design and decoration team will provide concepts and geometry of items but will not provide construction drawings or detail drawings. These will be the responsibility of the Builder.

#### 01.12.04 System Schematics

The following schematics are included:

- Fuel system
- Lubrication system
- Fire & Bilge system
- Fresh water system
- Sea water system
- Waste water system
- Hydraulic system
- HVAC system
- AC electrical system one line diagram

#### 01.13 Plan Approval

The Builder will submit to the Classification Society for approval all necessary drawings for the proper construction and Classification of the vessel. Copies of approved drawings are to be provided to the Owner's Representative and Architect.

Any plans developed by the Builder should be provided to the Owner's Representative and Architect in duplicate, of which one copy may be electronic.

#### 01.14 Trials and Tests

During trials, the yacht shall be at all times, in the care, custody and control of the Builder. Attendance of the Owner's Representative, Architect, Class Society and regulatory authorities at the time of the trials, at the carrying out of requests to make certain runs or maneuvers, whether informally arranged or according to an established trial agenda, shall not serve to place the yacht in the care or control of the Owner's Representative, Architect, Class Society or regulatory authorities at any time and the Builder agrees to hold the Owner, Owner's Representative, Architects, Class Society and/or regulatory authorities harmless in the event of loss or damage occurring during trials.

Trials will be conducted in accordance with the regulatory authorities' requirements and additionally:

- Prior to testing and inspection, all tanks and piping systems will be thoroughly cleaned and washed, and all slug, grit and debris will be removed.
- On completion of construction and prior to painting, all fuel oil tanks, ballast tanks, water tanks, oil tanks and sewage/sanitary tanks will be tested and inspected according to classification society requirements.
- Upon vessel completion, a thorough program of dock tests and sea trials are to be carried out to the satisfaction of the Owner's Representative, Architect and regulatory authorities. All proposed programs are to be submitted to the Architects by the Builder for approval before the vessel is completed. All operations covered by these trials are to demonstrate satisfactory performance and workmanship of all items, as to their suitability for the purpose intended, and to show that all requirements of the building specification have been met.
- All necessary sub-contractors or equipment personnel are to be present during their equipment commissioning or system trials.

- The trials to be conducted and staffed by the Builder, in the presence of the Owner's Representatives, Architects, Class Society and regulatory authorities and all data obtained to be recorded and tabulated by the Builder.
- Three copies of all data obtained are to be provided to the Owner's Representative and the Architect.
- The Owner's Representative shall have the right to select all fuel and lubricating oils and greases for commissioning and trials. All fuel and lubricating oil consumed during commissioning and trials shall be for the account of the Builder.
- All necessary materials and stores for the duration of the trials are to be provided by the Builder.
- After all trials a thorough examination of the vessel's structure is to be carried out. All system filters are to be changed and checked for foreign matter to ensure systems are thoroughly clean.
- Hose testing of all through deck fittings to be conducted after sailing trials.
- All defects found during these trials to be made good by the Builder and the vessel to be re-commissioned and thoroughly tested and all corrections approved to the satisfaction of Owner's Representatives, Architects, Class Society and regulatory authorities.

#### 01.14.01 Deck Trials

Deck trials are to be conducted alongside the Builder's facility and are to include at a minimum the following trials:

- Main engines, propeller systems and related equipment
- Generators, electrical systems and related equipment
- All deck, mooring and anchoring equipment
- Steering, emergency steering and thruster systems
- Calibration of all tanks
- Calibration of all sensors and monitoring systems
- All sailing systems
- Priming, pumping and substance tests for all pumps and piping systems
- Manual and automatic controls and alarm systems

Sea trials may not commence until all deck trials have been completed and all defects or deficiencies are cured to the satisfaction of Owner's Representatives, Architects, Class Society and regulatory authorities.

#### 01.14.02 Power and Maneuvering Trials

The Yacht is to be laden to the equivalent of full load draft and taken to sea for a series of runs (one in each direction) over a measured distance to determine the speed at maximum continuous power in deep water and under agreed upthra sea conditions.

Trials are to include a series of runs over a measured distance to determine H.P./B.P.M./Propeller Pitch/Speed Curves. These trials are to cover: maximum (100%) power, 80% of power, 60% of power and 40% of power.

High and low speed-maneuvering trials are to be conducted, to include full lock turning circle at continuous power and at such lower speeds as requested by the Owner's Representative, Architect and regulatory authorities:

- maneuvering astern
- emergency stop at 80% power
- UMS operation and electrical blackout trials
- operation of all machinery while at sea

- anchor handling and anchoring trial

Sailing trials may not commence until all power and maneuvering trials have been completed and all defects or deficiencies are cured to the satisfaction of Owner's Representatives, Architects, Class Society and regulatory authorities.

#### 01.14.03 Sailing Trials

Upon satisfactory completion of dock and power trials the Yacht will undergo sailing trials. Trials are to include a minimum of three 8 hour day trips at sea, with key Builder and principal sub-contractors' personnel aboard. During these trials the vessel's performance (boat speed, speed made good, course to apparent wind, apparent wind speed) is to be recorded. It is necessary for the satisfactory completion of sailing trials that they be conducted in suitable weather conditions; for full sail this should include true wind speeds of up to at least 16 knots. Trials under reefed conditions should be carried out in wind speeds of not less than 20 knots.

For the start of the sailing trials the vessel is to be loaded to at least median draft, stores and water to obtain cruising conditions.

The trials will include a testing of all navigation equipment as well as load sensors on the rig.

#### 01.15 Stability Calculations

The Builder must show by design calculations that the vessel will meet the intact and damage stability requirements for a catamaran auxiliary sailing vessel as required by all relevant authorities.

The Builder is responsible for measuring stability during construction and tracking all movements of the center of gravity. These will be submitted to the Architect on a monthly basis for review.

The appropriate stability tests will be conducted by the Builder when the yacht is fully rigged and ready for sea trials.

The Builder will deliver the vessel with an approved stability booklet.

#### 01.16 Masts and Rigging

The Owner's Architect will decide the rig geometry and will provide same to the Builder with the dimensions for the mast and rigging. The Builder will deliver final dimensions to the mast builder.

#### 01.17 Delivery of the Vessel

The Builder will deliver the vessel to the owner in accordance with the Protocol of Delivery and Acceptance, as set forth in the Contract, which means that the risk and expenses of the Yacht are transferred to the Owner from that date.

#### 01.18 Ship Documentation Books

The Builder will submit the following books to the Owner and will also include all available information in CD. Storage for the records is to be provided in the wheelhouse, captain's office or control room as applicable and is to include:

- A. Technical Documentation

All available printed or electronic documentation of equipment, such as: operation manuals, workshop manuals, service stations, parts lists, drawings, schematics, paint systems, lubrication systems, etc. is to be provided. All documents are to be organized, completed and provided with an index.

#### B. System Descriptions

A description of all important systems and equipment on board is to be provided. Information such as: where it is located, how it is connected, what it is supposed to do, how to start, to stop and to run, together with essential information such as: part numbers, type numbers, reference to manufacturer is to be included. The system description will be provided in separate books and on CD, with the documentation mentioned under C.

#### C. Maintenance Schedules

A preventive maintenance schedule for all equipment and coatings will be developed by the yard. The following intervals shall be applied. For example: daily, weekly, monthly, 3-monthly, 6-monthly, yearly, docking, 2-yearly and refit, as applicable all equipment and coatings. The maintenance is mentioned together with the step by step descriptions described more fully in section.

#### D. Coating Systems

A pipe coating system will be developed. The coating consists of self-adhesive arrows on a chrome-vizyl base in the international color code.

Electrical codes will be as specified in part 10A.

#### 01.19 Abbreviations

The following abbreviations are to be used in the Specifications:

<u>Abbreviation</u>	<u>Word or Phrase</u>
• MCA	British Maritime and Coastguard Agency
• BV	Bureau Veritas
• SOLAS	International Maritime Organization for the Safety of Life At Sea, 1974 and its Protocol 1988 (as amended)
• ABYC	American Boat & Yacht Council
• Sibel	Steubert
• TBD	To be determined
• HVAC	Heating, Ventilation & Air Conditioning

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Name	Number	Opening	Class	Location	Size (sqm)	Part/Sec'd
Port & Starboard engine room	2	Fixed	A-60	25200	1900 x 750	Both
Port & Starboard engine room	2	Fixed	A-60	21650	1800 x 800	Both
Forward VIP cabins exterior	2	Fixed	A-0	30595	2000 x 800	Both

Weathering doors are listed as follows:

Weathering doors will comply with the standards required for passenger vessels. The standards are defined in SOLAS Chapter II-1. The weathering doors will also display status on the MLC panel.

#### 2.04.01 Weathering doors

#### 2.04 Doors

Structural and non-structural glass as per the architect plans.

#### 02.03.02 Structural & Non-Structural Glass

All aluminum bulkheads are constructed of 5083 aluminum and 6062 T6 extrusions.

#### 02.03.01 Bulkheads

The sealings and surfaces are listed on the structural drawings.

#### 02.03 Hull Construction

The vessel is to be constructed of 5083 aluminum alloy plate with welded aluminum sections to be 6062 T6. Note that there is a pending development of higher strength marine grade alloys that may be considered. 5083 extrusions may be considered to save weight, if sufficient quantities can justify cost.

#### 02.02 Materials

The hull will be of welded aluminum construction and built under the supervision of the Bureau Veritas, the Architect and the Owner's Representatives.

#### 02.01 General

### 02 CONSTRUCTION OF HULL AND SUPERSTRUCTURE



**2.04.02 Weather tight doors**

Name	Number	Opening mode	Class	Location	Size (mm)	Port/Starboard
Main salon doors	1	Sliding	TBD	17950	1200 x 2200	Port
Main salon doors	1	Sliding	TBD	17950	800 x 2200	Starboard
Star door	1	Sliding	TBD	17950	900 x 2200	Starboard
Companion way guests cabins staircase	1	Sliding	TBD			Port
Companion way crew cabins staircase	1	Sliding	TBD			Starboard

The main salon doors will be automatic opening, activated by sensors from both sides.

**02.05 Hull Doors**

The hull doors and tender hatches are to comply with SOLAS Chapter XI-1, part 25-10.

The hull doors and tender hatches will be fitted with positive mechanical latches with fail safe arrangements. Hull doors will also display status on the MMSIC panel.

Hull door and hatch latching systems may be exposed in order to save weight.

**02.05.01 Starboard Lazarette Hull Door**

See drawing: *Gem\_T09\_starboard\_transom\_arrangement* and details in Bid Package phase II

The starboard hull door will open up, hinged on the upper edge. It will be used for access to launching the secondary tender. The tender will be launched with two C-Quays, or equal, board system.

- Opening width or length: 1750 mm
- Opening height: 1600 mm
- Height above WL: 500 mm

**02.05.02 Port Transom Door**

See drawing: *Gem\_T04\_starboard\_transom* and details in Bid Package phase II

The port lazarette transom door will open up, hinged on the forward edge. This door will allow for full head room in the lazarette serving as the diving compartment.

- Opening width: approximately 3550 mm
- Opening length: approximately 1350 mm

**02.05.03 Tender Hatchway**

See drawing: *Gem\_T01\_tender\_compartment* and details in Bid Package phase II

Tender hatches will be hinged on the outboard sides and lower for launching and recovery of the main tender. There should be a mechanical hooking device, with manual override, to lock the doors into closed position. There should also be a locking system to hold the tender in position. Crew access will be from the main deck cockpit from two lateral hatches (see Deck Hatches and lockers) and lead to two platforms fitted inside the tender compartment.

- Opening length both down: 8300 mm
- Opening width, both down: 3150 mm (2 x 1575mm)
- Height above WL: 2000 mm
- Other equipment: Hydraulic hoisting system for tender

#### 02.06 Chainplates

Chain plate size is to be determined. All chain plates are to be specified by the Architect.

#### 02.07 Tanks

##### 02.07.01 Fuel Tanks

See drawing: Gem F01 & F06.

The fuel system will comply with Bureau Veritas Rules, Part C, Machinery.

Tank volume will be maximized for the space permitting in accordance with the construction plans.

Six (6) integral fuel tanks with a total estimated capacity of approximately 31,450 liters, located between 17950 and 26300 in the cross deck with inspection hatches, fill & vent pipes and other necessary fittings. There will be a passageway between the fuel tanks for controlling the filling manifold. These tanks will be provided with top manhole access for maintenance.

##### 02.07.02 Fresh Water Tanks

Water tankage will be maximized. There will be two (2) integral water tanks with a total estimated capacity of approximately 3,600 liters, located in the cross deck, fitted with manholes, filling and vent pipes and connections.

##### 02.07.03 Waste Water Tanks

Two (2) integral holding tanks of approximately 4000 liters each are to be located in the keels with manholes for inspection hatches and tank connections. These tanks will be provided with top manhole access and side manhole access for dry dock maintenance.

Four (4) non-integral black water collection tanks of approximately 350 liters each are to be located in the bilges with manholes for inspection hatches and tank connections. These tanks will be provided with top manhole access for maintenance.

The tanks will be specially constructed and coated for waste water.

##### 02.07.04 Slop Tanks

Two (2) integral slop tanks of approximately 350 liters each are to be located in the bilges with manholes for inspection hatches and tank connections.

##### 02.07.05 Spill Water Tanks

One (1) spa water tank of approximately 3000 liters is to be built in the port bilge located between 16000 and 18000. It should be fitted with manholes for inspection hatches and required connections.

#### 02.07.06 Large DB Tanks

Two (2) integral hydraulic tanks of an approximate capacity of 500 liters each, are to be fitted as per the drawings.

#### 02.07.07 Dirty Oil Tanks

Two (2) integral dirty oil tanks of an approximate capacity of 900 liters each are to be built in the bilges between frames 24 and 25. They should be fitted with manholes for inspection hatches and tank connections.

#### 02.07.08 Hydraulic Oil Tanks

One (1) integral hydraulic storage tank will be fitted. Size and location to be determined.

Hydraulic reservoirs for the port and starboard thruster systems and main hydraulic pack are to be determined.

#### 02.08 Anchor Hardware

Two (2) anchor chain attachment points are to be installed in the lower chain locker with release pins accessible via an opening hatch or pull mechanism.

The windlasses and chain stoppers will be installed in deck lockers with locking deck hatches.

#### 02.09 Foundations for Deck Equipment

The structural reinforcement in way of all deck hardware will be determined by the Builder.

#### 02.10 Foundations/Reinforcements

Engines and variable pitch propeller foundations are calculated in accordance with Class Rules with consultation from the noise and vibration consultant.

#### 02.11 Hull Openings

The following is a provisional list of machinery space hull fittings. Please see drawing: *Gem\_C03\_freboard\_drawing*

##### **Port Hull**

- 1" Overboard Exhaust
- 1" Overboard Aft Guest Accommodation Bilge
- 1" Overboard Engine room fwd
- 2" Overboard Engine room Fwd (Emergency Bilge Discharge)
- 1" Overboard Fwd Guest Accommodation Bilge
- 1" Overboard Fore Peak
- 2" Overboard Aft Guest Accommodation Bilge
- 1" Overboard Engine Room Fwd (Hydraulic oil cooling)
- 1" Overboard Engine Room Midship (Water Maker Back-flush)

- 4" Sea Chest Suction Engine Room Fwd (Inboard & Outboard Hull)
- 3" Overboard Engine Room Aft Outboard Shell, Below Waterline (Main Engine Wet Exhaust)
- 6" Overboard Engine Room Aft Outboard Shell, Above Waterline (Main Engine Dry Exhaust)
- 2" Overboard Engine Room Aft Outboard Shell, Below Waterline (Inboard Generator Wet Exhaust)
- 3 1/2" Overboard Engine Room Aft Outboard Shell, Below Waterline (Inboard Generator Dry Exhaust)
- 2" Overboard Engine Room Aft Outboard Shell, Below Waterline (Outboard Generator Wet Exhaust)
- 3 1/2" Overboard Engine Room Aft Outboard Shell, Below Waterline (Outboard Generator Dry Exhaust)

**Stbd Hull:**

- 1" Overboard Lavette
- 1" Overboard Aft Crew Accommodation Bilge
- 1" Overboard Engine room Fwd
- 2" Overboard Engine room Fwd (Emergency Bilge Discharge)
- 1" Overboard Engine room Midship (Oil/Water Separator)
- 1" Overboard Fwd Crew Accommodation Bilge
- 1" Overboard Fore Peak
- 2" Overboard Aft Crew Accommodation Bilge
- 2 1/2" Overboard Engine Room Aft (A/C Chiller Cooling)
- 1" Overboard Engine Room Midship (Water Maker Back-Flush)
- 4" Sea Chest Suction Engine Room Fwd (Inboard & Outboard Hull)
- 3" Overboard Engine Room Aft Outboard Shell, Below Waterline (Main Engine Wet Exhaust)
- 6" Overboard Engine Room Aft Outboard Shell, Above Waterline (Main Engine Dry Exhaust)
- 2" Overboard Engine Room Aft Outboard Shell, Below Waterline (Outboard Generator Wet Exhaust)
- 3 1/2" Overboard Engine Room Aft Outboard Shell, Below Waterline (Outboard Generator Dry Exhaust)

**Wat deck:**

- Cockpit, deck lockers, tender compartment, passageway and forward locker drains as required by the Rules.

**02.13 Water Tube**

Two (2) Aquatex "Easy Stern Tube" shaft systems with seals will be constructed into keel as per the drawings.

**02.14 Watertight Bulkhead Penetrations**

All watertight and gas tight penetrations of pipes, cables and wiring are to be as tight as possible.

- Type: Rise or equal
- Approval: BV approved

03 STEERING INSTALLATION03.01 General

The yacht is to be provided with an electro-hydraulic steering system with helm wheels and lever steering located at the port and starb Hybridge steering stations and lever control steering from the salon control station in accordance with Class requirements.

The steering system is engineered and specified by Jastram Engineering, Ltd. The following main components are listed and details specified in quotation JQ041237A are attached in (Appendix A)

A walk around maneuvering plug-in device to be provided from the upper deck.

- Manufacturer: Jastram Engineering Ltd
- Jastram specification: B2-300-9-1-35
- Type: Electro-hydraulic
- Rudder angle: 35/35
- Rudder torque: 4814 lbf per rudder
- Turning rate: 17.0 sec (35/35)

03.02 Steering Principle

The two Hybridge helm stations will be operated by digital control helm units with supply information to the digital steering controller. The interior steering system will consist of a full follow-up and non-follow-up lever integrated with the digital steering controller.

03.02.01 Exterior Helms

Two (2) custom built steering wheels will be installed at the Hybridge helm stations and constructed to the Owner's selection of style.

- Manufacturer: TBD
- Material: TBD
- Diameter: 1000 mm
- Type: Spokeless
- Helm actuators: DECK digital helms

03.03 Rudders

The rudder blade will be built of carbon fiber. The stock will be built of Aluminum 22 HS and the internal foil diaphragms will be built of ANSI 316L, or as determined by the Architect. The lower stock diameter is 2000 mm and the upper stock diameter is to be determined.

03.04 Rudder/Rudder Transmission

The maximum rudder deflection will be 70°, hard over to hard over with a maximum steering wheel transmission will be adjustable.

- Tilts: Two (2) R-300
- Cylinders: Two (2) R-300-12-37-2

03.05 Power System



## GEMINI Project Contract Specifications

Van Peteghem &amp; Laurier Prévost Naval Architects

The system will be an electro-hydraulic system with dual steering motors and cross-over valves. Steering motors will be located in each lazarette above the rudder and out of the bilge area to the rudders. Attention will be taken to eliminate noise and vibrations from the steering system.

- \* Hydraulic Pack: Two (2) 7 hp @ 208/3/60
- \* Weight: TBD
- \* Controller: Two (2) motor starters
- \* Weight: TBD
- \* Alarm Panel: Four (4) AP-66
- \*

03.06 Rudder Shaft Bearings

Each rudder is to be supported by a minimum of two (2) self-aligning bearings.

- \* Upper bearing: TBD IP3
- \* Lower bearing: 200 mm IP3

03.07 Piping Systems

Piping systems will be high pressure stainless steel tubing. Tubing will be bead blasted in visible areas.

- \* Tubing grades: AISI 316/ASTM A269-04 or equal

03.08 Emergency Steering

Emergency steering is provided by means of a hydraulic steering pump system with connecting valves to each rudder system. The steering pump is to be located in an aft main deck locker.

03.09 Autopilot & Gyro System

Subject to integration with steering system and latest equipment models, the autopilot system will consist of:

Component	Manufacturer & Model
Gyrocompass	Anschutz: Standard 22 GCM
Autopilot	Anschutz: Pilotstar D

For further details, please see the attached Larry Smith Electronics proposal.

**04 MAIN ENGINE INSTALLATION****04.01 General**

The concept of the machinery space is to be executed with a high level of finish detail, including glossy paint and highly polished or bead blasted metal finishes. As such, the engines will be ordered as "Detailed" engines, complete with chrome and polished stainless steel finishes.

The Builder, with approval by the Architect will confirm the final engine specification, reduction gear ratio and propeller size prior to construction of the vessel.

The engines will be IMO MARPOL Annex VI compliant and arranged in accordance with Class and SOLAS regulations II-1/Part E and additional requirements for periodically unattended machinery spaces.

The propulsion system will be a twin engine, variable pitch propeller system. The system will be designed with a 'maneuvering' mode in which the engines will run at a constant rpm, with ahead/astern maneuvering provided by the variable pitch propeller control. The builder will work with the Architect with the sizing of the damper hydraulics to determine the power demand so that sufficient power is provided.

The engines will be arranged with maneuvering controls from all helm positions. The engine instrumentation for the helm stations will be provided on an electronic monitoring system.

The Builder will consult with a noise and vibration consultant to assure that the entire propulsion package (engine, reduction gear, propeller system, mounts and exhaust system) are optimum for noise and vibration control.

**04.02 Main Engines**

The main engines are as follows:

- |                  |                                     |
|------------------|-------------------------------------|
| • Manufacturer:  | Caterpillar                         |
| • Model:         | C-12                                |
| • Specification: | Inline 6 cylinder, 11.93L, 4-Stroke |
| • Power:         | 454 hp @ 2100 rpm                   |
| • Rating:        | "C" Rated                           |
| • Weight:        | 1177 kg                             |

**04.03 Engine Equipment**

The engine will be fitted with specified Standard Equipment, plus:

- Engine monitoring system with interface to the vessel monitoring system
- Local engine instrument display system in each engine room
- Throttle position sensor
- Gear box PTO with remote activated clutch
- Airsep® oil vapor trap and air filter
- Expansion tank
- Copper-nickel heat exchanger
- Seawater pump and inlet and outlet connections

- Crankshaft puller
- Gear oil cooler
- Lube oil cooler
- Double wall oil lines
- Fuel oil cooler
- 24 VDC starter motors
- SAE-1 flywheel housing or as required
- Primary fuel filter and water separator
- Connections to oil change system
- Spare parts kit (2 each)

#### 04.04 Gearbox

The reducing gear does not need to be a reversing gear as the pitch control will provide maneuvering. The following gear is listed as a guide only:

- Manufacturer: Twin Disc
- Model: M3 5114-A, or as appropriate
- Ratio: TBD: preliminary data: 2.5:1
- Weight: 206 kg dry
- SAE belt housing: TBD
- Electronic clutch control
- Engine-matched torsional coupling
- Heat exchanger
- Connections to oil change system

#### 04.05 Instruments

The each helm station will be equipped with monitor panels that display full engine and gear data and propeller pitch data and alarm status. This will be part of the vessel monitoring system.

Each engine location will also have a mechanical gauge package, including pitch position indicator. This display will be independent of the monitor system.

#### 04.06 Controls

Engine controls are to comply with Class and MCA requirements.

Engines are to be started & stopped from local engine room control and the flybridge stud helm position (TBD).

Primary engine, gearbox and propeller pitch controls are to be available from all helm steering stations by an electronic system.

- Manufacturer: Bosch Rexroth Mini-Mover.

As required by the Rules, back-up engine control systems are to be provided for local engine room control.

The variable pitch propeller control system will be approved by the pitch system manufacturer. Control is an electro-hydraulic system driven by the Lewmar Commander RPU or hydraulic power pack as specified in Part 07H Hydraulic Systems.

The engines and controls will still be provided with a reverse reduction gear controls in event of the pitch system to fail.

#### 04.07 Elastic Couplings

The main propulsion installation to be equipped with elastic couplings:

Between motor and gearbox:

- Manufacturer: TBD
- Type: TBD

Between gearbox and pitch system installation:

- Manufacturer: Amarteck
- Type: S152540 DA

The specific model number will be decided after calculations.

#### 04.08 Isolation Mounts

The engine/gearbox will be flexible mounted on four (4) rubber mounts.

- Manufacturer: TBD
- Type: TBD
- Weight: TBD

#### 04.09 Propeller Installation

The propeller shall be a variable-pitch prop. The gearbox will be sized to have a maximum of 900 shaft RPM with a 960 mm diameter propeller. The propeller tip clearance will be maintained at a minimum of 10% of the propeller diameter.

Line cutters will be provided for each propeller.

System quotation information is attached.

- Manufacturer: West-Mekan (supplied by Amarteck)
- Type: 80 EHVWS
- Propeller: 4 blade dia TBD
- Designed operating pitch: TBD
- Shaft diameter: 80 mm
- Shaft length: 4000 ~ 5000 mm estimated
- Propeller material: Ni-Al.Br.
- Shaft material: 1.4460
- Pitch control: Lowvlar Commander HPU controlled

#### 04.10 Shaft System

The shaft system is to be provided by the pitch system supplier. The propeller shaft provided with a Profend, or equal and standby shaft seal.

Cathodic protection will be provided for the shaft system.

#### 04.11 Exhaust System

The main engine exhaust to consist of a by-pass, water drop system as specified by Soundown Corporation. The exhaust by-pass will exit above the waterline with the main exhaust exiting below the waterline. Both risers will be fitted with water drops and drain lines if appropriate.

The exhaust system will be provided with all the necessary appendages, soft mounts, compensators and silencers for optional results including taps to measure temperature and backpressure.

• Riser:	Metal Marine Exhaust
• Material:	TBD
• Weight:	TBD
• Silencer:	Soundown
• Model:	SD19 a 32G water drop
• Fitters:	Trident Red Stripe
• Hull valves:	Typic ARJ



05 GENERATOR05.01 General

The Builder, with approval by the Architect will confirm the final generator specifications pending final load analysis before construction.

The engines will be IMO MARPOL Annex VI compliant and trimmed in accordance with Class requirements.

The Builder will consult with a noise and vibration consultant to ensure that the entire generator package (engine, sound shield, nozzles and exhaust system) are optimum for noise and vibration control.

Primary electrical service will be 208 volts, 3 phase, 60 Hz.

05.02 Generator Sets

The generator installation will utilize three (3) identical generators with electronic control which are to be integrated with an automatic power management system as provided with the electrical panels.

Due to the space requirements the two generators mounted in the port engine room, will be mounted in a single custom enclosure.

05.03.01 Generators:

• Manufacturer:	Northern Lights
• Type:	M1064D
• Rated:	40 kW (60 Hz, 1800 rpm)
• Weight:	847 kg (dry)
• Sound Shield:	Northern Lights
• Sound shield weight:	265 kg
• Sound shield dimensions:	2054L x 965W x 1159 H

05.03 Equipment on Generator Sets

The generators will be provided with the following equipment:

- Raw water pump for cooling
- Wet exhaust elbow
- 24 volt isolated ground system
- 24 VDC starting system
- 24 VDC electric gauges
- Electric shutoffs for Oil press, Water temp and over-speed
- Oil level gauge and sender
- Solenoid shutoff
- Paralleling kit
- Copper-nickel heat exchanger
- Lube oil cooler
- Connections to oil change system
- Fuel filter and water separator
- Digital tachometer

- Double wall fuel lines and drain
- Resilient mount system as specified by Silent Lina B.V.
- Spare parts kit; 3 total

#### 05.04 Instruments and Controls

The generator sets are to be controlled at the electrical panel constructed by Atlas Marine Systems with an automatic starting & paralleling function.

The engine and electrical system and their status are to be monitored by the vessel monitoring system and also by gauges mounted at the generators.

#### 05.05 Exhaust System

The generator exhaust systems are to consist of the components specified by Sanuslowe Corporation. The exhaust systems will a water drop system with gas exit above the waterline. The low points and silencers will be fitted with a drain. The overboard silencer will be fitted with water drop.

The exhaust system will be provided with all the necessary appendages, soft mounts, compensators and silencers for optimal results including taps to measure temperature and backpressure.

06 THROUSTER INSTALLATION06.01 General

The vessel will be provided with retractable bow and stern thrusters, located as per the drawing T\_13. The thrusters will be controlled from both the port and starboard bridge steering stations.

The port thruster(s) will be powered by the port main engine PTO hydraulic pump(s) and be independent of the starboard side thrusters. Likewise, the starboard side thruster(s) will be independent of the port side thrusters, be powered by the starboard main engine PTO hydraulic pump(s). Pending final location of the hydraulic power pack for the sailing systems, one thruster system will share a common reservoir with that Lewmar Commander HPU.

The Builder, with approval by the Architect and Project Manager will confirm the final thruster specification prior to construction of the vessel.

06.02 Thrusters

The four (4) thrusters will be retractable:

• Manufacturer:	Lewmar
• Model forward:	500 SVTAM
• Power:	275 hp
• Weight:	310 kg each
• Model aft:	400 SVTAM
• Power:	260 hp
• Finish:	Aluminum
• Weight:	230 kg each

06.03 Controls

Main activation will be centralized from the starboard side helm station. Each maneuvering station will be provided with control systems.  
See also Steering for third control.

All thrusters will have variable power, full-follow-up control and have independent operation between bow and stern.

06.04 Power Supply

The port side thrusters will be powered by port main engine driven PTO pumps. Likewise, the starboard side thrusters will be powered by the starboard main engine driven PTO pumps.

The Builder shall assure that the pressure and flow requirements are consistent with the required power.

• Manufacturer:	TRD
• Number:	X
• Specification:	Size 180
• Weight:	X
• Port reservoir:	X
• Starboard reservoir:	X

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Injection Hitting will be provided for each hydraulic reservoir as provided in the Hydraulic section.

06.06 Filtering

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**07A ANCHOR SYSTEM**

The ground tackle is to meet Bureau Veritas Rules Nr 381 Section S.3 Part III. The preliminary Equipment Number is 243. The Builder is to confirm the Equipment Number and size of the equipment with Class.

The anchors and chain handling systems are to be installed in well decks under the forward deck and fit with flush hatches. The windlasses will sit over the chain lockers at the hulls with 90° rollers to lead to the anchors at the centerline. Compression type chain stops will be provided. While at anchor, the vessel will lay on a bridle system attached to the forward beam ends.

The Builder will mock-up the anchor handling arrangements to assure function of the system.

**07A.01 Anchor Winches****07A.01.01 Primary Winches**

Two (2) hydraulic anchor winches with chain gypsies (only) will be installed in recessed foredeck wells with hatches. The windlasses will not have capstans. Controls will be on the foredeck only. The windlasses are to be reversing. The Builder will assure that the windlasses are capable of handling the anchor and chain.

- Manufacturer: Muir
- Type: VRC 11800
- Weight: 275 kg
- Power: Hydraulic
- Flow: 53 lpm @ 175 bar

**07A.01.02 Chain Equipment**

Chain compressor stoppers are to be provided and are to be of like quality to the anchor windlass.

**07A.02 Chain Lockers**

Two (2) reinforced chain lockers with chain pipes are to be fabricated inboard on each hull as per the drawing: T02\_Anchoring Arrangement. The lockers are accessed via side hatches within the hull and provided with drains to the lower corners.

The chain lockers are to be lined with a replaceable and sacrificial protective lining.

There will be a quick release pin or link at the bitter end to release the rode in event of emergency. This pin will be accessed without opening the chain locker.

**07A.03 Anchors****07A.03.01 Primary Anchors**

- Manufacturer: Maxson or equal
- Number: Two (2)
- Type: Plough; High Holding Power
- Weight: 412 kg
- Material: Bead blasted stainless steel



- \* Certification: BV Class or type approval

07A.03.02 Third Anchor

A third anchor will be carried in the dive locker with rode stowed on a reel.

- \* Manufacturer: Fortress
- \* Weight: FX-125

07A.04 Chains

For the primary anchors:

- \* Manufacturer: Hombstafer or equal
- \* Material: Stainless steel
- \* Chain size: 20.5 mm stud link
- \* Grade: Q2
- \* Length each rode: 150 m (492') per anchor
- \* Certification: BV Class or type approval

For the third anchor:

- \* 25' 1/2" SS Proof coil chain x 100' 1 1/4" nylon rode

07A.05 Chain Wash System

The chain wash system will operate from the fire main system. In addition, there will be a fresh water system hose in the foredeck locker.

**07B BILGE & FIRE PUMP SYSTEM****07B.01 General**

The bilge and fire pump system is to comply with Class requirements.

The piping systems are to be designed for maximum life cycle. Thus, we have selected 90/10 Copper Nickel as the metallic piping material.

The bilge pumping system will consist of eight (8) independent pumps, one in each compartment. The bow compartment (forward of collision bulkhead) will drain into the bow locker compartment by a manually operated valve with remote to the upper level of the bow locker. Emergency pumps will consist of engine driven pumps or the fire pumps with engine remote action. Pumps are to be located in a way to minimize standing water.

The fire main will consist of two independent pumps, one located in each engine room.

The vessel will also be provided with independent engine room FM-200 fixed fire fighting systems. Schematics of the bilge and fire systems and operation procedure shall be posted at each operating area.

**07B.01.02 Hull Watertight Compartments**

Each hull is divided into five (5) watertight compartments:

- Forepeak
- Forward cabins
- Machinery space
- Aft cabins
- Lazzaretto

**07B.02 Bilge Alarms**

Each compartment will be fitted with a High / High-High bilge water alarm connected to the main panel. The operating system will be provided for within the vessel monitor and M/Etric system. The pumps will be manually operated.

- Level Alarm Manufacturer: GEMS
- Type: LS-240-3
- Number: 10

**07B.03 Pumps****07B.03.01 Bilge Pumps**

- Manufacturer: Grundfos
- Number: 8 (eight)
- Type: Series 11 EF 75
- Rating: 63 gpm @ 7.9 m head
- Power: 3/4 hp; 208/60
- Weight:

07B.03.02 Fire Pumps

The fire pumps will be titanium, vertical centrifugal pump as follows:

- Manufacturer: Grundfos
- Number: 2 (two)
- Type: CRT 16-30
- Rating: 14.75 m<sup>3</sup>/hr @ 54.85 M (65gpm@180ft)
- Power: 7.5HP motor, 208/3ph/60hz
- Weight: 63.5 kg

07B.03.03 Emergency Bilge Pump

A portable pump will be provided, in accordance with the Rules.

- Type: Grundfos
- Model: Series H 15 T5

07B.04 Piping

All piping is to be metallic within the machinery space. Bilge piping outside of the engine rooms, where permitted by the Rules, will be plastic or composite. All fire main piping will be metallic with remote operated isolation valve at each engine room bulkhead as required.

As noted in 07A, the anchor wash system will be provided by a piping connection to the fire main system.

An international shore connection will not be provided.

07B.04.01 All Fueling Room & Fire Main Piping

- Manufacturer: Yard choice
- Alloy: 90/10 CuNi
- Standards: Class 200, ASTM B466
- Working pressure: 13.7 bar (200 psi)

Note the larger diameter from the sub fire pump to the anchor wash section. This diameter is larger as this pipe section will be highly used and the purpose is to minimize water velocity (mitigating corrosion).

07B.04.02 Bilge Piping Outside Engine Room

- Manufacturer: Yard choice
- Type: Aluminum or ASTM B466 ABS Plastic as appropriate

07B.05 Hoses and Nozzles

Hoses, hose storage and nozzles will as specified in 07B.04

Comments and materials will be provided as requested by the Rules. Briefs opposing will be provided pursuant to the Rules. Each brief will be reviewed with the opposing briefs and the court will file a written decision.

2020年12月27日

- \* \* Kallan Jachymen
- \* \* Type:
- \* \* Power:
- \* \* Weight:
- \* \* Dimensions:

Air quality review separator was off the prescribed for each engine room as required by the license. The separator will decompose the air before it is released.

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OSMAF Project Coordinators

**07C SEA WATER SYSTEM**

The installation of the sea water system should meet the Class Rules.

The piping systems are to be designed for maximum life cycle. Thus, we have selected 90/10 Copper Nickel as the metallic piping material. If the Builder proposes a different material, the cost difference and life cycle design will be provided.

**07C.01 Sea Chests**

There will be two integral, vented sea chests in each engine room, fitted with hull screens and sea valves as per the drawings and schematics.

**07C.02 Sea Strainers**

Sea Strainers will be fitted to the hull valves. All strainers will be provided with a blow-back connection from the compressed air system and vent pipes.

- Manufacturer: Cleantech or equal
- Type: Simplex with hinged cover
- Model: 820 - 4"
- Material: 90/10 CuNi body with 30/70 CuNi (wired) basket

**07C.03 Hull Valves**

Hull valves are to be butterfly valves. Materials are to be the best properties for life cycle and resistance to corrosion:

- Manufacturer: Keystone
- Type: Butterfly, lug type
- Diameter: 4"
- Body Material: Nickel aluminum bronze or iron
- Stem Material: 316
- Disc Material: AlBr

**07C.04 Piping**

The builder will use the following guidelines for the piping system:

- All seawater piping and valve arrangements are to be in accordance with Class Rules.
- Flexible connections to pumps and machinery to isolate vibrations will be provided.
- Where possible, isolation or flexible connections should be made with factory fused end fittings or bellows sections. The use of hose clamps will be minimized.
- Metallic piping will be provided to all distribution valves connected to the sea chest and overboard discharges. Where permitted by the Rules, thermoplastic pipe is to be used for branch systems to air conditioning, water makers and auxiliary systems.
- Fluid velocities are not to exceed 3.6 m/s (12 ft/s)
- Piping system to be function tested in accordance with BV Rules for the Classification of steel ships, Class E, Chapter 21, Section 3. The maximum test pressure to be 1.5 times the working pressure.
- Strainer mesh holes to be a maximum of 3 mm (1/8")
- Spindles of sea suction valves and discharge valves below the load line are to extend above the floor plates or by other means be easily accessible.



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- All pipe work is stainless 90/10 (copper-nickel) or MIL-T-16420 Class 200 unless noted otherwise.
- All pipe sizes specified in the schematics are nominal bore in inches & class or schedule.
- All pipe connections to be 90/10 class 200 copper-nickel butt welded fittings unless pipe section is required to be removed for maintenance.
- All pipe connections in removable segments to be ANSI 150 flanges or as noted.
- All pipe work to be adequately protected and supported.
- All flexible hoses and bellows are to be HV type approval.
- All sea water piping shall be marked with the name describing the system.

07C.04.01 Metallic Piping

- |                     |                                  |
|---------------------|----------------------------------|
| • Manufacturer:     | Yard choice                      |
| • Alloy:            | Copper Nickel 90/10              |
| • Standards:        | MIL-T-16420 Class 200, ASTM B466 |
| • Working pressure: | 13.7 bar minimum                 |

07C.04.02 Thermoplastic Pipe

- |                     |  |
|---------------------|--|
| • Manufacturer:     | Georg Fischer or other                       |
| • Type:             | ABS plastic or Beta Polyprop (thermoplastic) |
| • Standards:        | DIN: 8077/8078 type I                        |
| • Working pressure: | 13.7 bar minimum                             |

07C.05 Water Makers

See 07D Freshwater systems.

**07D FRESH WATER SYSTEM**

The fresh water system will comply with Class Rules as applicable and the World Health Organization and US Public Health standards for water quality.

If the Builder proposes alternative equipment and piping system, the Builder will provide cost and weight differences.

**07D.01 Fresh Water Tanks**

There will be two (2) freshwater tanks located in the center hull. Total capacity will be approximately 8000 liters. Tanks will be internally coated with a Ceramkote paint system.

**07D.02 Fresh Water Pumps**

Two (2) fresh water pumps will be required, one in each water tank. The pumps will be provided with the Headquarter control panel.

- Manufacturer: SUBPAQ
- Number: two (2)
- Model: SPX-2273-230
- Rating: 91 lpm @ 2.7 bar (24 gpm @ 40 psi)
- Power: 4.9 amps @ 208/3/60
- Dimensions: X
- Weight: 8 kg

**Control Panel:**

- Manufacturer: SUBPAQ
- Number: one (1)
- Model: CU-300
- Dimensions: X
- Weight: ~ kg

**07D.03 Water Heating System**

The vessel will be supplied with two (2) water heaters, one located in each hull.

The Builder will propose utilizing a waste heat recovery system from the generator closed cooling systems.

A re-circulation system will be fitted in the hot water delivery in each hull. The upper deck hot water supply will be from an electric, instant hot water heating element.

**Hot water heaters:**

- Manufacturer: Hubbell heaters
- Number: two (2)
- Type: ME 50-5-5CSR
- Capacity: 50 gal (190 l)
- Power: dual 5 kW element

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- Dimension: TBD
- Weight: TBD

07D.04 Piping

All fresh water piping to be an ABS plastic, or equal system. All hot water piping will be insulated to protect against heat loss and prevent sweating.

- Manufacturer: Yard choice
- Type: ABS
- Working pressure: 13.7 bar (200 psi)

07D.05 Accessories

Mixtures and fixtures for guest, officer cabins and luxury areas are detailed in Part 12 Interior Concepts, and include:

Area	H/C sink	H/C shower	Toilet	H/C tap	Cold hose bth
Owners suite:	x	x	x		
VP cabin:	x	x	x		
Port guest:	x	x	x		
Mid guest:	x	x	x		
Aft guest:	x	x	x		
#1 crew:	x	x	x		
Laundry:	x			3	
Galley:	2			3	
#2 crew:	x	x	x		
#3 crew:	x	x	x		
Capt cabin:	x	x	x		
Port eng room:				x	x
Starb eng room:				x	x
Salon Bar:	x				
Flybridge bar:				Cold only	x
Puredeck locker:					x
Main aft deck:					x
Port lazarette:					x
Starb lazarette:					x
Port transom:		x			
Starb transom:		x			

## Notes:

1. Hose connections will be concealed in lockers with the ability for hose connection to be made with the locker closed (hose lip in hatch cover).
2. Transom shower details to be decided with Owner's Representative.
3. Whether listed or not, the Builder will provide required pump-ups for all appliances.

07D.06 Water Filter

One water filter will be mounted at the discharge of the water pumps.

- Manufacturer: Neofastor
- Type: HFF-7304L

CEMBENT Project Contract Specifications

Van Petteghem &amp; Lauriot Prévost Naval Architects

- Weight: 15 kg (dry); 36 kg (wet)
- Dimensions:

07B.07 UV Sterilizer

A UV sterilizer will be mounted at the discharge of the water filter:

- Manufacturer: Headhunter
- Type: UV-40
- Power: 140 watts @ 208/1/60
- Weight: 16 kg (dry); 22 kg (wet)
- Dimensions: X

07D.03 Tank Filling

The tank fills are to be located on the side deck in the fuel tank 60 lockers. The fills will be closed with a screw cap and be 32 mm ID.

07E.04 Water Makers

There will be two (2) water makers, located in one engine room, installed with proper connections to electrical supply, water intake, cleaning system, product distribution and brine discharge.

- Manufacturer: Ros Recovery
- Model: AWF 1800-2
- Capacity (each): 6814 lpd (1800 gpd); 284 lph (75 gph)
- Power: FLA: R @ 208/1/60
- Dimensions: 845 w x 508 d x 432 h
- Weight: 77 kg each

The units are to be fitted with all necessary components per manufacturers' standard supply. Optional equipment is to include:

- Fresh water flush
- Media Filter assembly
- Soft motor start
- Clean rinse panel
- UV sterilizer
- pH neutralizing filter
- Chemical rinse

07E FIRE FIGHTING SYSTEM

The fire fighting inventory will comply with Class and MCA Large Yacht Code (LY2), as appropriate to the vessel and its equipment.

07E.01 Fire Detection System

The fire detection system is to comply with Class and MCA requirements. Fire and smoke detectors are to be fitted in each separate zone, with audio/visual alarm and display panel on the main panel and other areas as required by regulations.

- \* Manufacturer: DMR or Consilium Marine (?)
- \* Type: CS400
- \* Detectors: As required by the Rules

07E.02 Sea Water Fire System

A fixed fire main system with three (3) fire stations with combination nozzles and hoses is served by two independently driven fire pumps located in each engine compartment as specified in section 07B of this specification.

Hydrants are to be all connection type, fitted with boxes on stainless steel racks, the size and quantity as required by the regulations.

The number of hoses with nozzles required shall be provided to the satisfaction of the Administration.

Fire stations are listed in part 07B Fire & Bilge System and Schematic and are as follows:

Station	Location
1	Main aft deck
2	Main forward deck
3	Upper deck

07E.04 Sea Water Fire Stations

The fire stations will be provided with the following equipment:

- \* Manufacturer: Powhattan or Acron
- \* Type: Q2-464 15"
- \* Length: 18 m (59') maximum
- \* Diameter: 45 mm hose
- \* Nozzles: 19 mm jet/spray  
12 mm jet/spray for interior use.



Location	Quantity	Type	Model
Lights on deck of bar	1	FM-200	C-20
Salon	1	FM-200	C-50
Overhead audio	1	FM-200	C-20
VIP suite	1	FM-200	C-20
Lounges	1	FM-200	C-50
Casino	1	FM-200	C-100
2 Blue blankets			
Crew quarters all	1	FM-200	C-50
First engine room	2	FM-200	C-100; C-20
Stbd engine room	2	FM-200	C-100; C-20
Port Cabin forward	1	FM-200	C-20
Port cabins all	1	FM-200	C-20
Port lifeboats	1	FM-200	C-20
Stbd lifeboats	1	FM-200	C-20
TOTAL	15	FM-200	C-20

#### Preliminary Inventory

The locations are to be listed and described in the "Fire & Escape Plan". Accommodations, service and machinery shall be provided with portable fire extinguishers of appropriate types and in sufficient number to the satisfaction of the Administration.

#### 07E.06 Portable Fire Extinguishers

- Manufacturer
- Type
- Capacity
- Unit Weight
- 51 oz (1450 g) each compartment
- 135 kg

The vessel will be fitted with independent fire fighting systems for each engine room. The engine rooms will be arranged with independent automatic fuel, air and engine shut-downs, which manual stop as required by the regulations or systems manufacturer.

#### 07E.05 Engine Room Fixed Fire-Fighting Systems

07F PNEUMATIC SYSTEMS

There will be two independent pneumatic systems on board, one for the dive compressor system and one for the horn installation. In addition, there will be an emergency cross-over between the air horn receiver and dive compressor system.

- \* Air horn system
- \* Dive compressor system
- \* Distribution piping

07F.01 Air Horn

The air horn will be a Kahlenberg supplied system.

- |                    |                                |
|--------------------|--------------------------------|
| * Manufacturer:    | Kahlenberg                     |
| * Model:           | T-2                            |
| * Horn Controller: | M-511A                         |
| * Remote stations: | (2) M-131A                     |
| * Compressor:      | Kahlenberg                     |
| * Model:           | KA2000 (H-Jean)                |
| * Power:           | 3 kW 208/1/60                  |
| * Delivery:        | 6AD @ 8 bar: 88 lpm (3.11 cfm) |
| * Air Receiver:    | M-188                          |
| * Capacity:        | 2.63 m <sup>3</sup> (92.7 gal) |
| * Total Weight:    | 50 kg                          |

07F.02 General Pneumatic System

A general pneumatic system will be provided with air distribution system located in all technical areas of the vessel. The air supply will come from the air horn receiver. Hosea connections will be by Parker quick connect fittings. Air delivery locations:

- \* Upper deck locker
- \* Foredeck locker
- \* Port engine room
- \* Starboard engine room
- \* Port lazarette
- \* Starboard lazarette
- \* Cross over alley

07F.03 Diving Air Systems

The dive air systems will be supplied by the Builder and is to be as specified by the Owner's Representative.

07G WASTE WATER TREATMENT SYSTEM

The waste water treatment system will comply with MIL-STD 1472 and 33 CFR 151 regulations.

The concept of the waste water treatment systems are as follows. Please see the attached schematics for layout.

- In each hull, black water will be collected in two receiving tanks (one fwd, one aft) and transferred to a holding tank in the keel. From the holding tank, the treatment system will treat waste before discharge. The holding tank can also direct discharge overboard or to a deck pump out station.
- In each hull, gray water will be a gravity system, collected in two receiving pump units and transferred to the holding tanks in each respective hull. The holding tank can also direct discharge overboard, to the other hull or to a deck pump out station.

07G.01 Piping System

The waste water systems are to be installed according to the schematics. Requirements are as follows:

- The slope on gravity drains is to be a minimum of 1:96
- Piping to be in accordance with BV 2003 Rules, Part E, chapter 21, section 3
- Test pressure to 3 bar
- All piping to have solvent welded joints unless connected to equipment or providing for service access.
- All drains will be provided with vent traps.

Piping System will be:

- Type: ABS
- Schedule: 40
- Connections: Solvent weld or Socket unions

07G.02 Pump Pumps

Sump pumps will be isolated from the hull and provide transfer of gray water. Each pump will have a level sensor and control system for transfer to the holding tank.

- Manufacturer: Red Bullwater
- Model: Chipmunk CHK-AC
- Number: Four (4)
- Capacity: 106 lpm
- Power: 3.5 amp @ 208/60/1
- Weight: 14 kg

07G.02.02 Sump Tank Pump Control

The sump pumps are to be fitted with both automatic and manual switch control from the vessel's control and monitor system.

07G.03 Galley Sink System

The galley sink drains will be provided with a macerator and grease containment system. The macerators will be local at the sink. The grease grouper will be mounted in the ship engine room with easy access for cleaning.

- \* Manufacturer: Hirschmutter Greasegrouter
- \* Model: GG13.5
- \* Power: 20 amps @ 120/60
- \* Weight: 10 kg (22 lb)

**Macerator:**

- \* Manufacturer: TBD
- \* Model: TBD
- \* Power: 2 amps @ 120/60
- \* Weight: 10 kg (22 lb)

0761.05 Toilet system

The toilet system will be a jet flush system, supplied by the pressure fresh water system.

- \* Manufacturer: Hirschmutter
- \* Number: Ten (10)
- \* Type: RFA-02; Aero Wall Mounted
- \* Flush units: AK-24
- \* Weight: 25.4 kg

Note: the owner's suite and VIP suite will have the bids accessory provided.

0761.06 Black Water System

Each hull will have non-integral black water collection tanks as per the drawings. The tanks will be provided with liquor blowers for pre-treatment and aeration. The collection tanks will transfer to the holding tank prior to the treatment system.

Cooling systems and transmitters will be supplied by Hirschmutter.

The Builder will be responsible for:

- \* Proper flow of waste water
- \* Supply of non-integral tanks
- \* Internal coating of all tanks with Oxypolcoat

0761.07 Waste Treatment System

Each hull will have independent waste water treatment systems.

- \* Manufacturer: Hirschmutter
- \* Type: Tidal Wave
- \* Model: TW-50LP
- \* Dimensions: 18" high x 12" deep x 48" long
- \* Power: 4.8 amps @ 208/1/60
- \* Weight budget: 82 kg dry; 264 kg operating

Q7G.07 Waste Water Pumps

## Black/Gray water discharge pumps:

- Manufacturer: Headhunter/Grundfos
- Model: BR 75
- Number: Four (4)
- Power: 1/4 hp @ 208/1/60
- Weight: TBD

## Black water transfer pumps:

- Manufacturer: Headhunter
- Model: Mako M1-230
- Number: Four (4)
- Power: 3.2 amps @ 208/1/60
- Weight: 20 kg.

## Black water aeration pumps:

- Manufacturer: Headhunter
- Model: BR L80-130
- Number: Four (4)
- Power: 0.25 amps @ 208/1/60
- Weight: TBD
- Diffuser: QP/DF-24



07H HYDRAULIC SYSTEMS07H.01 General

The yacht will be outfitted with four (4) independent hydraulic systems. For design purposes, we have divided the systems in groups as follows:

- |                                  |         |
|----------------------------------|---------|
| ▪ Port hull thruster system      | Group 1 |
| ▪ Starboard hull thruster system | Group 2 |
| ▪ Main hydraulic system          | Group 3 |
| ▪ Steering system                | Group 4 |

Groups 1 & 2, thruster systems, will be independent in each hull, i.e.: Group 1, the port main engine will drive the port side thrusters and Group 2, the starboard main engine, will drive the starboard side thrusters.

As indicated in part 04 Main Engines and part 06 Thrusters, the thruster systems will be designed to operate with the engines in a 'maneuvering' mode. The engines will run at a constant rpm with ahead/astern maneuvering provided by the variable pitch propeller control. The purpose of this method is that the operator will be able to provide sufficient thruster and engine power without needing to (dis)engage the gear box.

Group 3, the main hydraulic system, will be a load sensing system, powered by the generators, consisting of a custom power pack located in the port engine room. The exact configuration is to be determined.

The steering system will not be discussed further in this section. Please refer to part 3 Steering Systems for information. However, all system engineering, part 07H.02, is applicable.

All power ratings are provisional pending final design requirements.

As applicable, control functions will be mounted adjacent to the given service, with easy access and visual contact if operated manually.

The Builder may propose alternative equipment and design that will decrease the system weight, improve efficiency and life cycle of the equipment.

07H.02 Group Functions07H.02.01 Group 1

Group 1 will be powered by the port main engine with control valves located forward of the engine for:

- Port bow thruster
- Port stern thruster

07H.02.02 Group 2

Group 2 will be powered by the starboard main engine with control valves located forward of the engine for:

- Starboard bow thruster

- S/bd stern thruster

#### 07H.02.03 Group 3

Group 3 will be powered by the main hydraulic pack located in the port engine room. Main feed and return lines will be run to the respective local control valves and blocks as per the schematic.

- Forward distribution will be from the Ops deck anchor locker area:
  - \* Port winchlass
  - \* S/bd winchlass
  - \* Port yawing and spinnaker winch
  - \* S/bd yawing and spinnaker winch
  - \* Genaker hailer
  - \* Inner headstay furler
  - \* Outer headstay furler
  - \* All mast hydraulics
  - \* Main halyard winch
  - \* Mast winch 1
  - \* Mast winch 2
- Upper deck distribution will be from upper deck technical space:
  - \* Genoa captive reel port
  - \* Genoa captive reel starb
  - \* Stayset captive reel port
  - \* Stayset captive reel starb
  - \* Main sail traveler
  - \* Port genaker winch
  - \* S/bd genaker winch
- Aft distribution will be from each lazarette area:
  - \* S/bd hull side door
  - \* Aft s/bd mooring capstan
  - \* S/bd lazarette tender strains
  - \* Port transom passeroile
  - \* Port transom platform
  - \* Port transom step door
  - \* Aft port mooring capstan
  - \* Main hull tender doors

#### 07H.02 Hydraulic Controls & Monitors

##### 07H.02.01 Groups 1 & 2

Groups 1 & 2 will operate independently of each other. Each group will be activated from the main bridge station with full operating control from the main bridge and both flybridge helm stations.

The thrusters systems will be monitored on the vessel monitoring and alarm system. The monitor functions are:

- \* Oil temperature\*
- \* High oil temperature, Alarm\*
- \* Low oil level alarm, Warning\*

- System pressure

Engine room monitors and gauges, port and starboard:

- Pressure filter clogging indicator
- Return filter clogging indicator
- Pressure: visual indication at the pumps and at external console positions
- Note: Due to the common oil reservoir, Group 1 monitors are common with Group 3 monitors

#### 02H.02.02 Group 3

The main power pack will be a Load Sensing system. With this type of system, a pump will deliver the amount of oil required by that particular valve, while the added feature that a number of services can be run at any one time, from one or more pumps as the demand requires.

The pump controller will rotate the three pumps in service between primary and stand-by service.

There will be an emergency stop supplied at each exterior helm station for the sailing functions.

The main hydraulic power pack will be monitored on the vessel monitoring system. The monitor functions are:

- Oil temperature
- High oil temperature, Alarm
- Low oil level alarm, Warning
- System pressure
- Low system pressure, Alarm

Local monitors and gauges:

- Pressure filter clogging indicator
- Return filter clogging indicator
- Pressure: visual indication at the gauges and at external console positions

#### 02H.03 Power Supplies

The following power supplies will operate the hydraulic systems.

The Builder will design and supply the hydraulic oil cooling systems.

#### 02H.03.01 Group 1 & 2 Thruster Power Supplies

The main engines will drive a single pump or set of tandem pumps for the bow and stern thrusters. The pumps will be fitted with remote activated clutches.

- |                       |     |
|-----------------------|-----|
| • Manufacturer:       | TBD |
| • Number:             | TBD |
| • Type:               | TBD |
| • Power:              | TBD |
| • Operating pressure: | TBD |

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- Flow rate: TBD
- Weight: TBD
- Dimensions: TBD

07H.03.02 Group 3: Main Power Pack

One triple motor, custom power pack will be provided for the main hydraulic system.

- Manufacturer: Lewmar
- Type: Custom Compressor 10+10+200
- Operation: Load Sensing
- Power: 3 x 9 kW (estimated)
- Operating pressure: 140 bar (2000 psi)
- Flow rate: Variable
- Weight: 300 kg Estimated
- Dimensions: (non-integral) twin tank, with top mounted pumps)

07H.04.01 Hydraulic Oil Filtering System

In addition to the standard inline particle filters, the main power pack will be arranged with an off-line filter system. The systems will have start/stop control manually by the engineer with alarms and pressure system stops as recommended by the manufacturer.

- Manufacturer: CC Leeson A/S
- Model: HDU 15/25 PY
- Flow rate: 120 l/h
- Power: 208/3/60; 1 kW
- Dimensions: 425 h x 345 w x 240 d
- Weight: 22 kg

07H.05 System Engineering

The Builder must carefully review the hydraulic system design for this yacht in order to provide the best solution for the high number of services required.

The Builder will calculate the fluid capacities of the reservoir tanks.

The system should be designed for:

- Ease of maintenance
- Flexibility
- Safety
- Reduce pipe work
- Maximize life cycle of the components

07H.05.01 Mounting of Pumps, Valves & Components

- All pumps to have flexible tails connecting to rigid pipe work
- The valve blocks and all other ancillary units relating to, or connected to pipe work shall be isolated to the structure for noise and vibration.
- The aft reservoir must be suitably isolated to the structure for noise and vibration.
- All deck machinery such as winches, windlasses, etc. to be mounted on sound deadening material.

0711.05.02 Pipe Work & Mounting Brackets

All pipe work is to be stainless steel high pressure tubing. Tubing will be highly polished in areas where visible. Parts that cannot be obtained in stainless steel shall be properly coated with an application of epoxy paint. The manufacturer of the pipe supplier is to be agreed upon with the Owner's Representative before installation.

- Manufacturer: Builders supply
- Pipe standard: ASTM 269 or DIN 24131 as applicable
- Pipe fittings: Stainless steel compression fittings are to be used on all pipe work of 1" and below, the same manufacturer to be used throughout the vessel's hydraulic system.
- Correct pipe size to be selected to minimize turbulent flow
- All pipe runs to be kept as straight as possible
- Long radius elbows are to be used only unless there is no other solution.
- Piping is to be secured in brackets using UCS or RBS type rubber isolation.
- All watertight bulkhead penetrations are to be pipe sections (not hose).
- Bulkhead penetrations will be as specified in part 02.15 Watertight Penetrations
- Pipe clamp spacing is to be as follows:
 

Pipe Size	Spacing
< 10 mm	1000 mm or every frame, which ever is less
10 to 25 mm	1500 mm or every frame, which ever is less
> 25 mm	2000 mm or every other frame, which ever is less

0711.05.03 Hoses & Mounting Brackets

Hose installations are to be as follows:

- Flexible hose are to be specified having a minimum 4:1 safety factor.
- Flexible hose tails to be, in general, a maximum of 1.5 meter long.
- The ends to be of stainless unless otherwise stated.
- Hoses are to be RT / RS above deck with stainless swage ends.
- When flexible hoses are used, they must be shielded and/or secured at chafe points
- Hoses will be clamped at every frame spacing or chafe points
- Where there is a fire/hot potential in close proximity to a hose, a fire sleeve must be fitted.
- Flexible hose may be used when trying to hard pipe in confined areas, thus saving the many complicated bends.



0714.05.04 Noise Control

The hydraulic system will be designed for maximum noise control. Of primary importance is the operation of the Main Hydraulic System for Group 3. The Builder will work with a noise and vibration specialist to minimize noise from the hydraulic system.

Fluid borne noise is the major problem and normally generated within the pump. Consideration will be considered for:

- \* Pump selection
- \* Select the correct size of pipe to reduce turbulent flow
- \* Minimize the number of pipe bends
- \* Use of the correct pipe clamp and location
- \* Use of reactive silencer
- \* Isolate mount all items in the system such as windings, piping, valve blocks and equipment.
- \* Always terminate rigid stainless steel pipes with flexible tails when above 16 mm in diameter. It is acceptable to rigid mount some of the smaller pipes below 16 mm.
- \* Use proper isolation mounts for equipment.

0714.06 Safety

- \* Emergency stop is to be provided at each (hydraulic) helm station
- \* All equipment installed is to be operated within the stress limits laid down by the manufacturer.
- \* Systems to be designed so that all components are easily accessible for adjustment and service.
- \* All valves with manual override facilities should be located within sight of the service being operated.
- \* The stop valves are to be fitted in return lines.

0714.07 Documentation

The vessel will be supplied with full technical documentation will be provided in separate binders and on CD; to include;

- \* Two (2) copies of manuals and service schedules
- \* Two (2) sets of drawings
- \* Pipe drawings
- \* Schedule of parts
- \* Service literature on each pump, valve, filter, etc
- \* Basic service instructions
- \* Electrical/control circuit
- \* Hydraulic deck machinery data

0714.08 Testing and Commissioning

- \* A full test and commissioning program will be proposed by the Builder for the approval of the Owner's Representative.

071 FUEL SYSTEM

There will be a total of six (6) integral aluminum fuel tanks, including the service tank, located as per the drawing: T07 Tanks Position & Geometry. The tanks will be located in the midship section of the wet dock. Tank capacities to be displayed on the monitor system. The tanks will be constructed and provided with fills, vents and service connections in accordance with Class Rules and MCA requirements. The fuel system will be arranged according to the drawing: S\_03 Fuel System Schematic.

The fuel fill and transfer system will be installed in the tank space for control of filling and transfer operations. Filling will be from the port and starboard lockers with remote actuated fill valves, directing fuel to individual tanks. The fuel transfer system will utilize remote actuated suction valves and discharge via the fill valves.

The fuel supply system for each engine room will draw fuel from a single service tank, located in the tank compartment. Each engine room will have remote stop valves on both the supply and return lines.

The fuel purifying system will be mounted in the starboard engine room. The system will draw fuel from any tank and discharge to any tank.

Fuel delivered to each engine room will have a booster pump mounted in parallel for priming of engines and filters. There will be a fuel conditioner installed to each engine room supply. Individual filters will be installed for each engine.

071.01 Storage Tanks

Each storage tank and the service tank will be provided with:

- Each with its own electronic level indicator.
- Each with its own magnetic level indicator.
- Each tank with piping connections as per drawing: S\_03 Fuel System Schematic.
- Docking plugs.
- Top mounted manholes clear of any permanent equipment or pipe installations.

071.02 Transfer Pumps

Two (2) benzene gear fuel transfer pumps will be installed in the tank space, as per the schematics.

- |                 |   |
|-----------------|---|
| • Manufacturer: | Oberdorfer                              |
| • Type:         | Q3-78970H-83-30718BCT-ER                |
| • Power:        | 1.5 hp; 208/3/60                        |
| • Motor class:  | TEFC, IE3E45                            |
| • Flow:         | 4360 lph @ 2.75 bar (19.2 gpm @ 40 psi) |
| • Weight:       | 24 kg                                   |

071.03 Fuel Purifier

One (1) fuel centrifuge system will be installed in the starboard engine room as per the schematics.

- Manufacturer: C.C. Jensen
- Model: FTF 27/27 P-EW
- Power: 208/3/60
- Performance: 1 gpm
- Weight: 78 kg (dry)

071.04 Fuel Priming pumps

One (1) fuel priming pump will be installed in each engine room as per the schematics.

- Manufacturer: Walbro
- Model: 6806
- Power: 1 amp; 24 VDC
- Performance: 7500 lph @ 275 bar (33 gpm @ 4 psi)
- Weight: 3 kg

071.05 Piping & Valves

The Builder will use the following guidelines for the installation of the fuel system:

- All tube to be seamless annealed stainless steel grade 316L to ASTM A269 standard.
- All stainless steel piping and fittings are to be bead blasted finished.
- All pipe sizes specified are OD.
- Flexible pipe couplings and their installation are to comply with the requirements of BV Rules.
- All pipe connections are to be 316 grade stainless steel butt welded fittings unless pipe section is required to be removed for maintenance or attached to equipment.
- All fittings in removable sections are to be Swagelok or flanged manufactured from 316 grade stainless steel.
- All valves are to be of fire safe stainless steel construction to API607
- All ball valves are to be of 3-part construction.
- Pneumatically operated valves will operate at 7 bar (100 psi).
- All pneumatically controlled valves are to be arranged for local manual operation. These valves are also to be provided with a means of indication of open and closed position at each control position. In addition, local indication of valve position is to be provided at the valve position where direct manual operation is required.
- Where fuel tanks are fitted with inlet or outlet pipes below the level of the appointed overflow pipe, shut-off valves are to be located directly on the tank. Stub pipes not longer than 1.5 of the pipe diameter, between the tank and the valve, may be accepted.
- Pipe work will be color coded and marked with the description, i.e.: Diesel supply, Diesel return, etc.

071.06 Fuel Conditioners

Magnetic fuel conditioners will be installed in each engine room supply line so as to serve all engines.

- Manufacturer: Adipac-X or equal
- Series: LGX-1500
- Port size: 1/4"

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- Flow rate: 350 gph
- Weight: 9 kg

272.01 Fuel Filter

The fuel filter will be provided as follows:

Engine	Generator	Main Engine
Filter Model:	500 MAX-P	75/900 MAX-P
Number of:	3	2
Filter Element	2 micron	2 micron
Height	292	432
Width	147	476
Depth	122	279
Weight	1.7	10.4

07J LUBE OIL SYSTEM

Independent lube oil systems will be installed in each hull. Each system will consist of a dirty oil tank and a clean oil tank. Refer to the attached schematic: Lube Oil System schematic.

- An independent dirty oil pump will drain the engine sumps to the dirty oil tank and also discharge the dirty oil tank to deck.
- An independent clean oil pump with hose reel will provide clean oil for distribution.

07J.01 Clean Lube Oil Tank

The clean lube oil storage tanks will be 500 liters each, located as per the drawings.

The clean oil supply will be filled from the respective fill lockers on the port and starboard decks.

07J.02 Dirty Lube Oil Tank

The dirty lube oil storage tanks will be 550 liters each, located forward of the engine room as per the drawings.

The dirty oil will be discharged by the dirty oil pump to the respective fill lockers on the port and starboard decks.

The Builder will provide a 10 m hose with quick connect fitting to discharge the dirty oil ashore.

07J.03 Oil Pumps

The dirty oil pump will be used to empty the selected engine sump and discharge the dirty oil tank to deck using a 3-way valve system.

The clean oil pump supply the hose reel system. The hose reel system will provide oil to the engines via a metering nozzle.

Pumps will be provided with a pressure limit switch or relief valve to prevent over-pressure of piping and hoses.

- |                 |                     |
|-----------------|---------------------|
| • Supplier:     | Depco               |
| • Manufacturer: | Oberdorfer          |
| • Number:       | Four (4)            |
| • Model:        | OB-N9904-30N12B1C-W |
| • Power:        | .75 kW/ 208/60/3    |
| • Weight:       | 27.6 kg each        |

07J.04 Piping & Fittings

The following shall apply to the delivery piping systems:

- All tubing to be seamless stainless steel 316L to ASTM A369 or equal.
- All fittings in removable sections are to be Swagelok or flanged manufactured from 316 grade stainless steel.
- Tubing bends will be long radius.



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- All valves are to be full bore ball valves
- Engine sump connections to be flexible Aeroquip FC234-12, SAE J1942 hose with heat jackets in accordance with the Rules.

All valves will be full bore bronze valves.

- Manufacturer: Cochrane, or equal
- Type: Full bore ball valves

07.06 Oil Feed

An oil feed will be provided in each engine room for adding oil to the engines. The nozzle will be equipped with a metering device.

- Manufacturer: Keckcraft
- Type: 5600 OLS
- Hose ID: 1/4"
- Hose Length: 30 feet
- Dimensions: TBD
- Weight: 10 kg (est)

Metering Nozzle:

- Manufacturer: Liquid Dynamics
- Type: BM-20
- Part No: 530109

07.07 Tank Monitor System

Clean and dirty oil tank monitoring will be provided and will display on the vessel monitoring system.

The Builder will furnish specification details of the monitoring system.

Dirty Oil:

- Manufacturer: Houdtinter
- Type: TSI
- Control Unit: SYM3Q
- Output signal: TBD

Clean Oil:

- Manufacturer: Genco
- Type: Sure site mini alloy
- Control Unit: TBD
- Output signal: TBD

07K BAR, GALLEY & LAUNDRY EQUIPMENT

At this time, a design consultant is reviewing the design, layout and equipment for the galley and laundry. The following is provided as a preliminary list and data from an initial proposal that was to the client's wishes.

07K.01 Connection oven

- Manufacturer: Guggenau
- Model: GD 388
- Dimensions: 850 x 560 x 75
- Power: 5.8 kW 2 N°EAC 400 V
- Weight: TBD

07K.02 Cook top

- Manufacturer: M&M Kochenmeister
- Model: 2 piece induction range with 2 zones @ 7 kW  
1 induction wok @ 3 kW  
1 griddle plate @ 7.2 kW
- Weight: 190 kg

07K.03 Conrol Oven

- Manufacturer: Haus Dampf
- Model: Guld 6 1/1 ON
- Power: 18.9 kW 3 N°EAC 400 V
- Weight: TBD

07K.04 Microwave

- Manufacturer: Panasonic
- Model: NN 1037
- Power: 13 amps

07K.05 Ice Maker

- Manufacturer: Southern Ice
- Model: ACS 125W
- Dimensions: 675 x 524 x 897
- Weight: 48 kg

07K.06 Under Counter Fridge

- Manufacturer: Foster
- Model: LH 150
- Power: 120V, 13amp
- Weight: TBD

07K.07 Under Counter Freezer

- Manufacturer: Foster
- Model: LR 140
- Power: 120V, 13amp

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- Weight: TBD

07K.08 Trash compactor

- Manufacturer: Insinkerator
- Model: E1518E
- Dimensions: 310 x 510 x 840
- Power: 120 VDC
- Weight: 61 kg

07K.09 Dish Washer

- Manufacturer: Miele
- Model: G7855 or 7859
- Dimensions: H 85cm, W 60cm, D 60cm
- Power: 9.4 kW 3NPEAC 400V
- Weight: TBD

07K.11 Sinks

All sinks are to be selected by the interior design or galley consultant. All sinks are to be fitted with waste disposal units and drain to a Haulbutter Grease Grouper system located in the wild engine room.

- Type: Insinkerator brand 3/4hp motor-continuous feed  
Or Viking VUPW 1020 -continuous feed model

07K.12 Washing Machines

There will be two washing machines. Washing machines will require remote liquid dispenser for detergents, due to the dryers being fitted above and blocking the regular fill drawers.

- Manufacturer: Miele professional 7.5kg
- Model: WS 5073-MC13
- Dimensions: H 102cm, W 73cm, D 74cm
- Power: 3 phase @ 8.5kw
- Weight: 147 kg

07K.13 Drying Machines

There will be two dryers.

- Manufacturer: Miele professional 7.5kg
- Model: T6185
- Dimensions: H 102cm, W 73cm, D 72.5cm
- Power: 3 phase @ 8.5kw
- Weight: 75 kg

07K.14 Rotary Oven

- Manufacturer: Miele

07K.15.01 Project Contract Specifications

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- \* Model: RM 16-83
- \* Dimensions: H 96cm, W 105cm, D 38cm
- \* Power: 3 kW @ 202/60
- \* Weight: 38 kg

07K.15.02 Main Bar Equipment

The above bar will be arranged with the following equipment. Final design is to be determined by the interior designer.

07K.15.02.1 Ice Maker

- \* Manufacturer: Subzero Ice
- \* Model: ACS 125W
- \* Dimensions: 675 x 521 x 897
- \* Weight: 48 kg

07K.15.02.2 Bar Fridge

- \* Manufacturer: Gaudin, or equal
- \* Model: RCO/REFVS with manual compressor
- \* Dimensions: 840 h x 118 w x 513 d
- \* Weight: TBD
- \* Capacity: Storage:    kg (x 1b)

07K.15.02.3 Wine Cave

- \* Manufacturer: Euro Cave
- \* Model: 3064T
- \* Dimensions: 874 h x 659 w x 698 d
- \* Weight: 48 kg

07K.15.03 Bar Glass Washer

- \* Manufacturer: Miele Professional
- \* Model: G785S
- \* Dimensions: 850 h x 608 w x 600 d
- \* Power: 3 kW ; 3 phase option
- \* Weight: 70 kg

07K.15.04 Bar Coffee Machine

- \* Manufacturer: Jura/Capresso
- \* Model: S9 automatic
- \* Dimensions: 356 h x 356 w x 397 d
- \* Power: 1250 W ; 110
- \* Weight: 11,8 kg

## GERMIN Project Contract Specifications

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07K.14 Fly Bridge Bar Equipment07K.14.01 Ice Maker

- \* Manufacturer: Scotsman Inc
- \* Model: ACS 125W
- \* Dimensions: 675 x 521 x 897
- \* Weight: 48 kg

## Smaller option:

- \* Manufacturer: Scotsman, Inc
- \* Model: BCM 45
- \* Power: 450 watts; 230V/60
- \* Dimensions: 790 h x 487 w x 523 d
- \* Weight: 43 kg
- \* Production: 38 kg per day
- \* Storage: 15 kg

07K.14.02 Bar Fridge

- \* Manufacturer: Ganku, or equal
- \* Model: MCV15DG
- \* Dimensions: 840 h x 116 w x 513 d
- \* Power: 208/60
- \* Weight: YBD
- \* Capacity: 164 bottles

07K.14.03 Wine Cave

- \* Manufacturer: Euro Cave, or equal
- \* Model: S264F "Vintaguard"
- \* Dimensions: 874 h x 654 w x 698 d
- \* Weight: 72 kg
- \* Capacity: 195 bottles



**08 BUILT-IN REFRIGERATION AND FREEZER SYSTEMS****08.01 General**

In addition to the galley refrigerators, there will be a walk-in chilled room with freezer room inside, located at the forward end of the galley. The boxes are to be custom designed by the Builder and constructed in stainless steel, to utilize the available volume with consideration to other technical services in the area.

There will be a frozen garbage compartment located in the aft ship hull below the crew deck. Construction details to be determined.

All refrigeration systems will be provided with dual independent compressor and evaporator systems for redundancy.

Other requirements as follows:

- The refrigeration systems will operate between  $-1.5$  to  $3.5^{\circ}\text{C}$  ( $29$  to  $30^{\circ}\text{F}$ ).
- The freezer systems will operate between  $-15$  to  $-18^{\circ}\text{C}$  ( $+5$  to  $0^{\circ}\text{F}$ ).
- The chilled garbage systems will operate between  $-3.3$  to  $-1.6^{\circ}\text{C}$  ( $26$  to  $29^{\circ}\text{F}$ ).
- Dimensions are as per the General Arrangement drawings.
- High efficiency insulation will keep compressor sizes reduced.
- All units will be AC powered.
- All compressors will be located in aft engine room with water cooled condensers.
- All boxes to have interior light.
- Freezer and garbage compartment door gaskets are to have heaters.
- All boxes to have drain plug with manual drain system and/or a means to clean and are to have heaters.
- All boxes to have individual temperature control with remote thermometers (C/F) for local display.
- All boxes to have individual shut-off switches when not in use.
- All boxes to have storage rack systems of food grade stainless steel.
- Temperatures will be monitored by the vessel monitoring system.

**09 HEATING, VENTILATION & AIR CONDITIONING (HVAC)**

Of primary importance to the Client is the quality of the HVAC systems. It is important that the system provide adequate cooling in all climates and that make-up air be sufficient for maximum air quality. In addition, the aft main deck will have provisions for enclosing a large area with enclosures, and this area is to be provided with fan coil cooling. The details, dimensions and volume of this area is to be finalized.

The ventilation systems are to comply with applicable Bureau Veritas Class Rules, as applicable. All vent and duct systems will be provided with necessary controls and air dampers and insulated for fire protection as required by the Rules. All intake vents will be insulated for thermal and fire protection as required and attention will be given for maximum sound dampening in all aspects of the installations.

We are presenting a preliminary proposal from AquaAir for a fan coil system with make-up and extraction air systems. Delta T has specified the engine room ventilation systems. The Builder may propose alternative equipment and arrangements provided it saves weight, cost and efficiency. The Owner's Representative will have final approval for alternative proposals.

**09.01 Air Conditioning System Design**

We have worked with AquaAir Marine Air Conditioning Systems, Hialeah, FL for the design and supply of the air conditioning systems for the vessel. The air conditioning system will be a chilled water, fan coil system.

The Builder will consult with the system supplier on the use of a ducted system for the upper deck salon, bridge and main salon.

The temperature in each compartment will be controlled by digital thermostats. Make-up air and extraction air will be from centralized units.

The yacht is intended for use in tropical and temperate climates and is to perform to the following conditions:

■ Design Conditions:			
Summer	Outside	35°C @ 85% RH	95°F
	Inside	23°C @ 50% RH	73.5°F
	Seawater	30°C	86°F
Winter	Outside	10°C	41°F
	Inside	21°C	69°F
	Seawater	5°C	41°F

**09.01.01 Chilled Water Pipe Systems**

All chilled water distribution piping is to be a light weight system. Tubing design is to be in accordance with the system supplier design requirements. Required data points will be provided for control by the vessel control and monitor system. All piping will be insulated to protect against heat loss and prevent sweating.

- Type: Copper
- Standards: Type M
- Working pressure: TBD

09.01.02 Duct Systems

The ducting systems design is to be in accordance with the system supplier design requirements. Where required, all ducting will be insulated to protect against heat transfer and prevent sweating.

The duct systems will be provided with sound dampeners or chambers to minimize noise from fan coils or air change systems.

Provisions will be provided for access to ducting for adjustment of flow control valves and access points for cleaning and replacement shall be considered by the Builder.

Note that the interior design has limited space available between the structure and equipment. Ducting in many areas will be required to be flat rectangular sections to accommodate the limited space.

09.02 Galley Air Systems

The Builder will design and provide the galley air systems to comply with the provisions of MCA section 141.4. In addition to the fan coil systems, the galley will be provided with:

- Extraction air stove hood with air balance fresh air intake system.
- Estimated maximum capacity of 1500 m<sup>3</sup>/h.
- Variable speed extraction air system.
- Stove hood extinguishing system with electrically operated fire damper.
- Required emergency shut-offs and control systems.

09.03 Engine Room Ventilation System

We have worked with Delta "T" Systems of Palm Beach, FL for the design and specifications of the engine room ventilation systems. It is requested that the Builder work with these companies for the supply and installation of the ventilation systems.

The ventilation systems are to comply with Class Rules and MCA section 141.4 as applicable.

The port and starboard ventilation system pass up through the cabin deck, up through the hatch with intake and exhaust air mix eliminators on the upper deck coaming. Components are as specified in the attached spreadsheet Delta "T" Systems quotation.

09.04 Forward Lockers, Lavette and Tender Compartment Ventilation Systems

The lavette and tender compartment ventilation systems are included with the air conditioning system. As these compartments will contain hazardous materials, i.e. petrol and battery systems, the ventilation systems will provide a minimum of 6 air changes per hour. We have selected make-up air handlers to provide fresh air to the compartments to control humidity.

10 ELECTRICAL10.1.01 General

The electrical equipment and its installation should meet the standards of BV Class and the standards and recommended practices of the American Boat & Yacht Council.

Atlas Marine Systems has performed preliminary electrical design work and a load study for the electrical system. Electrical panel dimensions and one-line diagrams are provided. In addition, calculations, studies and descriptions will be provided as part of the vessel electrical system agency classification documentation.

The AC electrical system will be a 120/208 VAC, 3-phase, 60-Hertz system with a grounded neutral. Circuit breakers will be 1, 2, or 3-pole as appropriate for the load. Ground conductors will be included in cables to all AC power users.

The main DC electrical system will be a 24VDC system with grounded negative. Circuit breakers will be 1-pole with two conductor circuits to each.

A 12VDC electrical system with grounded negative will be provided in the area of the wheelhouse to power computer monitors and other 12VDC instrument loads as required. The power supply will be thru a 12C-12C voltage converter. Circuit breakers will be 1-pole with three conductor circuits to each unit (positive, negative and ground).

When at sea, the electrical power will be provided by three (3) diesel engine-driven generators; two in the port engine room, one in the starboard engine room. The generator controls will allow automated or manual paralleling. The Main AC Switchboard will supply electrical power to large users and to sub-distribution panels located throughout the vessel. It will have a split bus and the bus tie switch will be normally closed when the generators are paralleled.

Two shore cables will be provided near the stern of the port lazarette to allow connection to shore generated electrical power when desired. The shore cables will be connected to an Atlas SkyPOWER frequency converter. Preliminary output power is estimated at 60kVA.

An Atlas uninterruptible power supply (UPS) will be provided to provide clean, spike and noise-free AC electrical power for audio-visual entertainment equipment, communications equipment and other noise sensitive users. As part of this system, a "critical load AC bus" with battery backup will be provided to supply devices that require uninterrupted electrical power. An example of this type load is programmed entertainment system tuners or videocassette recorders that lose their settings during power outages and must be reprogrammed by the crew after each electrical power outage. The output voltage of the UPS will be a (120/240 VAC, 60 Hertz) system. Preliminary output power is estimated at 12 kVA.

Ladder type cable trays will be provided in areas where large numbers of electrical power and control cables change. Cables will be installed in a manner that prevents mechanical and corrosion damage and prevents electrical "crosstalk" and interference between electrical systems.

All electrical equipment, including junction boxes, is to be accessible for service and maintenance.

Bond all electrical equipment as required by Class. This includes bonding of metal enclosures to hull ground and high quality marine wiring practices.

Warning labels will be installed where appropriate.

Electric motors will be TEFC type, rated for continuous duty and have an ambient temperature rating of 45 degrees centigrade in engine rooms and 40 degrees centigrade elsewhere. Motors that are part of another system, such as air conditioner air handlers or other appliances, are exempt.

Emergency lighting will be automatically activated if main AC power is lost. There will be at least one emergency light in each major compartment and passageway.

## 10A.02 ELECTRICAL CONSTRUCTION PRACTICES

### 10A.02.01 General

Persons installing electrical will be trained marine electricians familiar with quality marine electrical construction practices.

### 10A.02.02 Electrical Cable Construction Practices

Electrical cable installation (General):

- All cables used are to be rated 85 degrees Centigrade minimum.
- Both ends of all electrical power, control and ground cables will be clearly identified with permanent identification tags based on cable ID numbers provided in the electrical system design documentation.
- The following types of cables will be segregated from each other throughout their entire lengths: control cables, instrumentation cables, entertainment system cables, AC power cables and DC power cables.
- Shielded cables will be used where specified in the electrical documentation.
- Cables specified by equipment manufacturers will be used.
- Electric cables connected to resilient mounted equipment will have sufficient length to allow free movement of the equipment.

Electrical cable installation (Class Requirements):

- All cables used in the construction are to be approved by the classifying society or constructed in accordance with Class rules or to a recognized standard.
- Cables are to be selected as to avoid mechanical damage, water, oil, fuel and excessive temperatures. Where cables could be exposed to mechanical damage, they are to be armored or protected by a conduit.
- Cables may run on under floors where practical.
- Where cables pass through watertight bulkheads or decks, watertight glands are to be fitted.
- Where cables pass through a non-watertight bulkhead, decks or other structural members, they are to be protected against chafing.
- Cable support trays, cable clips, glands and bushings are to be of corrosion resistant materials.
- The distance between cable supports is to be about  $5d + 20$  where  $d$  is external diameter of cable measured in centimeters. The maximum allowed distance between cable supports for cables is 50 centimeters.
- The minimum bend radius for cable is  $4d$  for thermoplastic or rubber-like insulated cables without metal covering ( $6d$  if  $d > 25$  mm) and  $6d$  for the same cables with metal covering.
- Cables are not to be spliced except in approved metallic junction boxes.
- Cables are not to be attached to any tank or pipe carrying fuel or oil.



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- A monitored and internal starting and stopping of generators based on load requirements.
  - Automatic and manual generator paralleling.
  - Synchronizing of power lines to generator, and generator to generator.
  - Operation in single bus or split bus modes.
  - Full monitoring per agency requirements.
  - Synchroscope.
  - Ground current meter.
  - Automatic fault clearing.
  - Communication link to vessels allowing monitoring system for remote monitoring and control of electrical systems and interconnectivity.
  - Communication ports and output for load control.
  - Isolated support line, neutral and ground buses.
- The MEACS will be designed and supplied by Allen Marine Systems.
- The MEACS will be located in the port engine room and will have all necessary controls, monitoring and protective devices to control the operation of electrical generators, monitored and controlled by the following features will be provided:

#### 104.02 Main AC Distribution (MEACS)

The electrical system consists of and operating, panels with DC of yacht quality, ergonomically designed and with crew friendly human interfaces. Communication will be given to water entry, emergency, emergency response and operation in a high level of redundancy.

#### 104.01 General

#### 104.00 ELECTRICAL SYSTEMS, AC

- AC One Line Diagram (optional)
- DC One Line Diagram (optional)
- Main AC Switchboard, Physical Dimensions (optional)
- Main DC Switchboard, Physical Dimensions (optional)

The following documents are attached and considered part of this specification:

#### 104.03 Appendices

Electrical equipment should be located well clear of flame areas where the available power is likely to be available within the space and the so constructed as to prevent the escape of sparks (ie. fire) as the fire is likely to be contained. Electrical equipment less than 10' should be provided with an easily accessible and identified means of isolation outside the space, with a fixed flameable gas detector/alarms fitted to the compartment and venting/alarms on the main engine bays and elsewhere in the compartment with a 141.3.1.2. When any of these requirements are not practical, then the electrical arrangements should be limited to a suitably vented exhaust to the atmosphere, but not directly into the engine.

#### 104.02.03 Electrical Equipment, AC

10B.02.01 Main AC Switchboard (MACS)

- \* Manufacturer: Atlas Marine Systems
- \* Model: TP-MACS-1,400-6.3,120/208,GN-3,12.2-72x20.8x30
- \* Dimensions: 1829 w x 529 d x 762 h
- \* Weight: 159 kg (350 lbs)

10B.03 AC Sub-Distribution Panels

It is planned that one AC sub-distribution panel will be located in each watertight compartment to minimize bulkhead penetrations. The Builder may opt to minimize the number of panels depending upon the actual number of distribution circuits required.

The AC sub-distribution panels in non-technical spaces will be installed in a manner that hides the enclosure from direct view (behind joiner work).

Note that the circuit numbers reflect five connections. I.E., a 3 phase circuit breaker requires 3 circuits in the panel, whereas a single phase circuit requires one panel circuit.

Preliminary sub-distribution panels for AC circuits are as follows:

	<u>Location</u>	<u>Circuit</u>	<u>Circuit Amps</u>
1	Port engine room	TBD	TBD
2	Star engine room	TBD	TBD
3	Port hull aft	TBD	TBD
4	Port hull fwd	TBD	TBD
5	Star hull aft	TBD	TBD
6	Star hull fwd	TBD	TBD
7	Galley & Main Deck	*TBD	TBD
8	Plybridge & Main Deck	TBD	*TBD

\* It will have a split bus and the bus tie switch will be normally closed when the generators are paralleled

10B.04.02 AC Sub-Distribution Panel Type

- \* Manufacturer: MerlinGenius, or equal
- \* Model: Progenia or equal
- \* Capacity: TBD
- \* Main Breaker or Switch: None
- \* Cable Entry: Various
- \* Color: TBD
- \* IP Rating: As required
- \* Hinged door: TBD
- \* Branch Circuit Breakers: TBD

10B.05 Shore Power Systems10B.05.01 Atlas SherPOWER Frequency Converter

A shore power frequency converter will be supplied with the following features will be provided:

- \* The unit will deliver full output power from any three-phase or single-phase input, at any input voltage from 400-550 Volts AC, and at any input frequency, 50/60 Hertz (assuming adequate power from shore is available).
  - \* The unit will automatically sense the incoming power characteristics and convert the power to the voltage and frequency required by the vessel.
  - \* The output will be pure sine wave output.
- |                 |                        |
|-----------------|------------------------|
| * Manufacturer: | Atlas Marine Systems   |
| * Model:        | SPA                    |
| * Capacity:     | 60 KVA                 |
| * Dimensions:   | 1676 H x 813 W x 517 D |
| * Weight:       | 459 KG (1010 lbs)      |

10B.05.02 Galvanic Isolators

Galvanic isolators will be provided as per the electrical drawings:

- |                 |                    |
|-----------------|--------------------|
| * Manufacturer: | Daisyland Electric |
| * Model:        | G1-10kA-S-100-CC   |
| * Number:       | Two (2)            |

10B.05.03 Shore Cables

Shore cable features:

- |              |                   |
|--------------|-------------------|
| * Quantity   | 2                 |
| * Location   | Stem of each hull |
| * Length     | TRD               |
| * Capacity   | 100Amp            |
| * Conductors | 4                 |
| * Cable reel | TRD               |

10B.06 Computer Power Source

Exact configuration is to be determined. Computers necessary for MCA compliance are powered from the 24VDC emergency batteries. Other computers are connected supplied by the Main AC, Main DC battery systems, or UPS as appropriate. Exact configuration will be determined later.

10B.07 Uninterrupted Power Source

The entertainment system, noise sensitive and other critical loads including computers will be supplied AC power from a 12 KVA uninterruptible power supply (UPS), which provides the following features:

- \* Continuously provides conditioned, clean, spike and noise-free AC power for sensitive electronic equipment and additionally provides uninterrupted power upon the loss of AC input power

- The output of the UPS will be configured into two separate outputs, one critical and one non-critical.
- Upon loss of AC power, the non-critical load is disconnected from the UPS converter while the critical load continues to operate on the battery pack until AC power is restored or the battery system is depleted.
- The UPS is sized to accommodate the total load requirements, and the battery pack is sized to accommodate the critical load only.
- Metas are provided to monitor operation.

Power distribution from the UPS will be via dedicated sub-distribution panels. Size and location to be determined.

The UPS system will be designed and manufactured by Atlas Marine Systems, and consist of the following components:

- Frequency converter
- Battery
- Battery Charger

#### Frequency converter:

- Manufacturer: Atlas Marine Systems
- Model: SPJEL32K63111A3-1FD
- Capacity: 12 kVA
- Dimensions: 334 w x 414 d x 969 h
- Weight: 227 kg (500 lbs)

#### Battery:

- Manufacturer: Atlas Marine Systems
- Model: BP3
- Dimensions: 760 w x 330 d x 760 h
- Weight: 163 kg (360 lbs)

#### Battery Charger:

- Manufacturer: Atlas Marine Systems
- Model: BC3
- Dimensions: 303 w x 152 d x 346 h
- Weight: 27 kg (60 lbs)

10C DC SYSTEMS10C.01 General

The one line diagram of the DC electrical system will be as specified in the Atlas Marine Systems drawing 105192

## DC Electrical system - General:

- The main DC electrical system will be a 24 VDC system with grounded negative. Circuit breakers will be 1-pole with three conductor circuits to each user: positive, negative and ground.
- 24VDC electrical system supplies house and emergency 24VDC loads.
- 12VDC electrical system supplies house and emergency 12VDC loads, if required. This voltage will be provided thru DC-DC converters.
- Generators and Main Engines will be 24VDC, isolated ground systems.
- Battery parallel switch will be installed in the port engine room to parallel 24VDC batteries for engine starting.

## DC Electrical system - Class Requirements:

- Battery over-current protection and disconnect switches will be installed in metal enclosures rated IP22 and in compliance with ABYC standards.
- Battery spaces are to be ventilated to avoid accumulation of hydrogen gas generated during charging.
- Batteries are to be securely mounted to prevent movement due to the motion of the vessel.
- Batteries are to be installed in acid-resistant trays to prevent the possibility of spilled electrolyte reaching the boat structure or fittings.

10C.02 DC Distribution10C.02.01 DC Distribution Panels

The Main DC Switchboard will be located as specified in the port engine room.

The DC sub-distribution panels in non-machinery spaces will be installed in a manner that hides the enclosure from direct view (behind joiner work). Panels will have to be easily removable.

DC distribution panels will have the following features:

- Volt and current meters to show battery voltage and pertinent DC system currents. These meters will have over-current protection.
- Single pole branch circuit breakers will have a split bus and the bus tie switch will be manually closed when the generators are paralleled at each DC user circuit.
- Ground and Negative buses.

Sub-distribution panels for DC circuits will be as follows:

<u>Location</u>	<u>Circuits</u>	<u>Circuit Amps</u>
1. Main DC Switchboard in Port Engine Room	TBD	TBD
2. Port Ling Ram 24VDC Sub-Distribution Panel	TBD	TBD
3. Side helm station 24VDC Sub-Distribution Panel	TBD	TBD
4. Salon helm station 12VDC Sub-Distribution Panel	TBD	TBD



10C.02.02 DC Distribution Wiring

The Builder will determine if the emergency lighting and alarm system wiring may be combined with the control and monitor system wiring.

The DC distribution wiring will be limited to:

- Engine room starting and control systems
- Emergency lighting and alarm systems
- Control and monitor systems
- Security system
- Navigation instruments
- Communication equipment
- Toilet valves

10C.03 Batteries10C.03.01 Engine Room Start Battery Banks

Each engine room will have a starting battery bank consisting of two batteries in series.

- Manufacturer: North Star Battery Co. (Meridian Marine)
- Type: NSB130FT (AGM)
- Number: 4 total; 2 in 2 banks
- Voltage: 12 volt cell
- Capacity: 126AH 1500 Marine Cranking Amps
- Weight: 38 kg each; 152 kg total
- Dimensions: 560 l x 1251 w x 227 h (each battery)

10C.03.02 24 Volt House / Emergency Battery Bank

To be located in cross deck under the Saloon helm station, one bank of two (2) volt cells connected in series.

- Manufacturer: Mastervolt
- Type: MVSV1260 (Gel)
- Number: 12
- Voltage: 2 volt cells
- Capacity: 1200 amp-hours
- Weight: 97 kg each; 1,164 kg total
- Dimensions: 215 l x 272 w x 688 h (each)

10C.03.03 24 Volt GMDSS Radio Battery Bank

To be located in the Saloon helm station, two 12 volt cells;

- Manufacturer: Mastervolt
- Type: TBD
- Number: 2 total; 2 in 1 bank
- Voltage: 12 volt cell
- Capacity: TBD amp-hours
- Weight: TBD kg each; TBD kg total
- Dimensions: TBD

IBC.04 CHARGING SYSTEMIBC.04.01 General

- \* The 24VDC start battery banks in each engine room will be charged by a 50 amp AC powered battery charger.
- \* Two 100-amp battery chargers will charge the 24VDC house/auxiliary battery bank.
- \* One 50-amp battery charger will charge the 24VDC GMDSS Radio battery bank.

IBC.04.02 Battery Chargers

Battery chargers will have the following features:

- \* Battery chargers will be the fully automatic type.
- \* Battery chargers will have internal over-current protection on the DC output.
- \* Battery chargers will have voltage regulation with temperature compensation.

IBC.04.03 Engine Room Battery Chargers

- \* Manufacturer: Mastervolt
- \* Type: MASS 24/50
- \* Model: 40020300
- \* Number: 2
- \* Voltage primary: 180-260VAC, 1 phase, 60 Hz
- \* Voltage secondary: 26.5-28.8V DC
- \* Dual output: Yes
- \* Dimensions: 343 h x 262 w x 120 d
- \* Weight: 5 kg

IBC.04.04 24 VDC House/Auxiliary Battery Charger

If required, to be located in the Salon helm station:

- \* Manufacturer: Mastervolt
- \* Type: MASS 24/100
- \* Model: 40021000
- \* Number: 2
- \* Voltage primary: 180-260VAC, 1 phase, 60 Hz
- \* Voltage secondary: 26.5-28.8V DC
- \* Dimensions: 422 h x 318 w x 150 d
- \* Weight: 9.1 kg

IBC.04.05 24 Volt GMDSS Radio Battery Charger

To be located in the Salon helm station:

- \* Manufacturer: Mastervolt
- \* Type: MASS 24/25
- \* Model: 40020250
- \* Number: 1

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• Voltage primary:	120-260V AC, 1 phase, 60-Hz
• Voltage secondary:	26.5-28.8V DC
• Charge current:	25 amp
• Dual output:	Yes
• Dimensions:	325 h x 221 w x 112 d
• Weight:	2.8 kg

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10C.05 Alternators

Each main engine and generator will not be provided. Charging will rely upon battery chargers as a means of saving weight.

**10D LIGHTING AND PLUGS**

The lighting systems will be state of the art, high quality, marine fittings and accessories, installed in accordance with the interior designers plans.

Lighting systems for interior compartments that are technical areas will be provided with switch controls only. Other interior and exterior lights, where indicated, will be dimmable.

"Luxury areas" are considered to be the owner's suite, saloon, guest accommodations, including upper deck and main aft deck. These lighting systems will be controlled by Light Touch<sup>®</sup> systems.

**10D.01 Switch Material**

Bulkhead and wall switch plate materials will be as per part 13 Interior Concepts for luxury areas.

Switch material for interior compartments that are crew accommodations, bridge, machinery areas, galley, crew mess and service areas will be appropriate to the location. The Builder will provide the Owner's Representative with several options for selection.

	Luxury areas	Other areas
• Manufacturer:	Light Touch or TBD	TBD
• Cover plates:	Light Touch or TBD	TBD

**10D.02 Plugs & Socket Connectors**

Plug and socket connectors will comply with Class Rules.

The number will be sufficient to provide for service areas, entertainment and personal use. The plugs will be as specified in the Part 13 Interior Concepts. Guidelines as follows:

- Each berth will have one plug.
- Each desk will have a minimum of two plugs and a CAT 5 plug for the computer network.
- Each bulkhead will have a plug for every 4 m in bulkhead length.
- A drawer or locker at the salon navigation station will be provided with a minimum of 6 plugs to charge radios and other small equipment.
- Plugs located in wet locations, such as heads, galley, engine rooms, tender compartment and protected deck locker locations are to be ground fault protected and will be provided with moisture proof or watertight covers in accordance with regulatory requirements.

• Manufacturer:	TBD
• Model:	TBD

Note that there may be floor plugs in the salon. These are to be flush mounted plates with covers. To be selected by the Builder.

**10D.03 Interior Lighting**

Interior lighting is to be specified by the interior designer as laid out in the plans.

All lighting listed below is 120 VAC, 60 cycle with exceptions as noted.

Note that there may be some additional lamps required on the final design.

Tube sizes are to be determined later by the Interior Designer. All lights are to be rated for the environment that they are in; e.g.: moisture proof, watertight, explosion proof.

For night vision, individual lamps, or lamps with dual bulbs are to be fitted in appropriate locations of the vessel. The total numbers of locations are to be determined. The probable list of areas is as follows:

- Fly bridge
- Navigation stations
- Exterior stairways
- Air main deck
- Salon
- Interior stairways
- All lower deck passageways and service areas.

The following interior lighting is offered for budgetary purposes:

#### 10D.03.01 Interior Lighting

Particular attention should be paid to ensure that lockers and the galley are brightly lit. The interior light list is as follows:

##### 10D.03.01.01 Main salon

The main salon will be provided with 20 down lights on 4 circuits.

The bar will be provided with under counter lights (TBD)

The navigation station lighting will be appropriate for night use. Lighting is TBD.

Indirect lighting will be provided in ceiling recesses and at floor level under the bar, fixed side furniture and cabinets.

##### 10D.03.01.02 Entertainment Lounge (TV area)

The entertainment lounge will be provided with 8 down lights on 1 circuit.

Indirect lighting will be provided in ceiling recesses and at floor level under fixed side furniture and cabinets.

##### 10D.03.01.03 Forward Passageway & Entry Stairs

The forward passageway will be provided with 6 down lights on 1 circuit.

Indirect or floor level lighting will be provided at floor level under fixed side furniture and cabinets.

Stairs will be fitted with indirect lighting, for each stair with an overhead landing area down light.

10D.03.01.04 Forward Guest Suite & VIP Cabin

All lighting circuits will be on dimmer control circuits.

Each cabin will be provided with 12 down lights. Circuits will be:

- At entry door, door to deck and closet (4 lights)
- At bed area (4 lights)
- Bathroom (2 down lights plus mirror column lights)
- Shower (1 light)
- Toilet (1 light)

In addition each closet will have internal lights working from a door activated switch.

Each bed will have 2 reading lights.

Indirect or floor level lighting will be provided at floor level under fixed side furniture and cabinets.

10D.03.01.05 Port Hull Guest Cabins

All lighting circuits will be on dimmer control circuits.

Each cabin will be provided with down lights and indirect lighting. Circuits will be:

- At entry door and floor area, (6 lights)
- At bed area (2 reading lights)
- Indirect ceiling and floor level lights
- Bathroom (2 lights plus mirror column lights)
- Shower (1 light)
- Toilet (1 light)

In addition each closet will have internal lights working from a door activated switch.

Indirect or floor level lighting will be provided at floor level under fixed side furniture and cabinets.

10D.03.01.06 Crew Accommodation Cabins

All lighting circuits will be on dimmer control circuits.

Each of the four cabins will be provided with down lights. Circuits will be:

- At entry door and floor area; Capt: 5 lights; other crew: 4 lights
- Reading lights at bed area (light each berth position)
- Indirect floor and ceiling lights
- Bathroom (1 light)
- Shower (1 light)
- Toilet (1 light)

In addition each closet will have internal lights working from a door activated switch.

10D.03.02 Technical Areas10D.03.02.01 Crew Mess & Laundry



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All lighting circuits will be on dimmer control circuits.

Crew mess will be provided with (5) down lights. There will also be provision for night lighting. Indirect or floor level lighting will be provided at floor level under fixed side furniture and cabinets.

The laundry will be provided with (4) down lights.

10D.03.02.02 Galley

Galley lighting will be provided with multiple circuits for night and day use.

- Circuits: 2 x overhead; 1 under counter; 1 x indirect
- Manufacturer: TBD
- Model: TBD
- Rated: TBD
- Illumination: TBD
- Power: 120/60
- Dimensions: TBD

10D.03.02.03 Tender Compartment, Port & Starboard Lazarettes

The tender compartment and lazarettes will contain patrol and/or battery systems and require appropriate rated fixtures.

- Number: 2 for port lazarette  
2 for starboard lazarette  
2 or 4 for tender compartment
- Manufacturer: Aqua Signal, or equal
- Model: TBD
- Rated: 120/60
- Illumination: TBD
- Power: 120/60
- Dimensions: TBD
- Weight: TBD

10D.03.03.04 Engine Room

Each engine room will contain six (6) fluorescent light fixtures, one (1) of which will be a self-contained emergency light. In addition, there will be a bilge light provided forward and aft of the engine.

Primary lighting:

- Number: 5 per compartment
- Manufacturer: Aqua Signal, or equal
- Model: 1044405200
- Rated: 1P 67
- Illumination: 1 x 40 watt equivalent

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- \* Power: 120/60
- \* Dimensions: 1340 x 192 w x 109 d
- \* Weight: 6.6 kg each

## Emergency lighting:

- \* Number: 1 per compartment
- \* Manufacturer: Aqua Signal, or equal
- \* Model: 0244406000
- \* Rated: EExe
- \* Illumination: 2 x 40 watt element
- \* Power: 120/60
- \* Dimensions: 1400 x 230 w x 163 d
- \* Weight: 14 kg each

102.03.02.05 Refrigerated Room

The walk-in refrigerator will be lighted. The switches will be located outside the door and have an "on" indicator:

- \* Number: 1 per compartment
- \* Manufacturer: TBN, or Aqua Signal, or equal
- \* Model: 1064405200
- \* Rated: IP 67
- \* Illumination: 1 x 115 watt elements
- \* Power: 120/60
- \* Dimensions: 1340 x 192 w x 109 d
- \* Weight: 6.6 kg

102.03.02.06 Other Areas

Additional lighting will be provided for the following spaces. The lighting will be incandescent bulbs, installed in protective enclosures rated as required by the Rules.

- \* In upper deck technical areas (2) (at capive reels)
- \* Stiff lockers

103.04 NAVIGATION LIGHTING

Navigation lighting will be in accordance with COLREGS 1972 for sailing yachts 20-50 metres. All navigation lighting is to comply with the approval of the Flag Administration. The lighting will be arranged with proper panel display and alarms as required by the Rules.

The following light models are selected from the AquaSignal 2002-2003 catalogue but are not intended to restrict the Builder to this manufacturer.

Navigation lights to be controlled from the MIMIC panel at inside navigation station. (anchor, steer, nav, NUC)

## GEMINI Project Contract Specifications

Van Peteghem &amp; Lauriot Prévost Naval Architects

10D.04.01 Running Lights

All primary running lights will be dual lamp fixtures if required:

- \* Manufacturer: Aqua Signal 70th series
- \* Port side 3584205
- \* Starboard side 3584105
- \* Steaming 3584005
- \* Stern 3582705
- \* Rated: 10 56; IMO
- \* Power: 2 x 45 watt; 120/60
- \* Dimensions: 550 h x 220 sq base

10D.04.02 Anchor Light

The anchor light will be single fixture lamp. The forward anchor light will mount on the forward beam strut.

- \* Manufacturer: Aqua Signal, or equal
- \* Model: 3870765
- \* Number: 1
- \* Rated: 10 56; IMO
- \* Power: 45 watts; 120/60
- \* Dimensions: 320 h x 220 sq base

10D.04.03 Main Mast Lights

In addition, the vessel will be provided the following 200\* lights mounted on the main mast.

- \* Manufacturer: Aqua Signal, or equal
- \* Masthead top 307 series red
- \* Mast side lights at top 307 series green, mounted with 2 m vertical separation to masthead red.
- \* Rated: 10 56; IMO
- \* Power: 65 watts; 120/60
- \* Dimensions: 320 h x 220 sq base

10D.05 EXTERIOR LIGHTING10D.05.01 General Deck Lighting

The following deck lighting will be provided. The Builder will provide light specifications for the approval of the owner's representative.

- \* Safety and courtesy lights, as required by the Rules, at all exterior stairs, transom steps, forward cockpit and entries, including: upper deck stairs and port/starboard main deck stairs to interior.
- \* White lights in all forward cockpit storage and ground tackle lockers

10D.05.02 Main Deck aft

## GHMNP Project Contract Specifications

Van Peteghem &amp; Laroche Prévost Naval Architects

The aft main deck overhead will have flush mounted lights and indirect lighting in the ceiling recess and under floor furniture, controlled by the Light Touch system. The final arrangement is to be determined by the Architect.

Down Lights

- Number: 25
- Circuits: 4
- Manufacturer: Underwater Lights, or equal
- Model: MR16
- Rating: 8' 65
- Power: 50 watt, 120/60
- Reflector: Angle to be determined (10°, 30°, 30° or 45°)
- Dimensions: \_ bezel; \_ mm cutoff; \_ mm depth

Indirect Lights:

- TBD

101.03.03 Upper Deck

The upper deck lighting will be mounted in the opening frame for deck illumination. The following is provided for budget purposes:

- Number: 20 white down lights
- Circuits: 2
- Manufacturer: Underwater Lights, or equal
- Model: Medium eyeball
- Rating: 8' 65
- Power: \_ watt, 115/60

101.05.04 Deck Flood Lights

Deck flood lights will be mounted under the main mast antenna supports to illuminate the fore deck area and aft upper deck.

Main circuits: Port bow  
Starboard bow  
Port upper deck  
Starboard upper deck

- Number: 4
- Circuits: 4
- Manufacturer: Underwater Lights, or equal
- Model: S23011-120V Par 30

101.05.05 Mast Flood Lights









Main deck installed flood lights will illuminate the main mast. These will be welded aluminum inserts in the main deck as per the drawings.

- Number: 4
- Circuits: 1
- Manufacturer: Underwater Lights
- Model: PAR 30 Adjustable Flood Light
- Rated: IP 68
- Power: 150 watt; 120/60; metal halide lamp remote dimmable
- Reflector: 99 mm dia; angle to be determined (5°, 8°, 25° or 45°)
- Glass: 15 mm (for weather deck area)
- Dimensions: 244 w x 135 d x 203 h

#### 100.05.66 Controllable Spot Lights

Remote controllable spotlights will be provided with dual operation stations. One light will be intended for port side use from the port flybridge helm with remote operation to the inside helm. The other light will be intended for starboard side use from the starboard flybridge helm with remote operation to the inside helm.

The controllable spotlights will provide for full 360° coverage with maximum overlap possible.

- Number: 2 (or a single light)
- Circuits: Independent
- Manufacturer: The Carlisle & Finch Co.
- Model: CCF2500-R3
- Power: 250W; 120 VAC
- Dimensions: 386 l x 324 w x 333 h
- Weight: 12 kg
- Master control: 1 x C4-3-1
- Slave control: 1 x C4-2M-1

#### 100.05.67 Docking Light

Lighting will be provided in the aft upper deck for night operations with the tender out docking. Lighting will be flush mounted to the hull using welded aluminum inserts as per the drawings.

- Number: 2
- Circuits: 1
- Manufacturer: Underwater Lights
- Model: PAR 30 Adjustable Flood Light
- Rated: IP 68
- Power: 150 watt; 120/60; metal halide remote dimmable
- Reflector: 99 mm dia; 45° angle
- Glass: 15 mm
- Dimensions: 244 w x 135 d x 203 h
- Weight: 3 kg

100.05.03 Underwater Lights

Underwater lights will be provided, both for safety and visual effect. The lighting will be worked in fixtures below the waterline with the following circuits:

Circuits:	8 lights inboard hulls between 0000 and 8000 16 lights outboard hulls between 0000 and 18000 2 lights inboard at 34000 (anchoring) 2 lights inboard at 38000 (anchoring)
▪ Number:	36
▪ Circuits:	4
▪ Manufacturer:	Underwater Lights
▪ Model:	G006-230 (models vary for projection angles)
▪ Rated:	Type approval for underwater use
▪ Power:	15W watt; 120VAC
▪ Reflector:	TBD
▪ Dimensions:	TBD
▪ Weight:	2.5 kg lamp fixture 2 kg ballast

100.06 EMERGENCY LIGHTING

Emergency lighting will meet the requirements of Rules. The Builder will work with the Administration for the required safety lighting. Note that we have specified safety lights on the interior light bus. The exact number and type are to be confirmed by the Builder.

Alleyways, horizontal and vertical stairways and exits giving access to and including the muster and embarkation stations shall be adequately lighted.

Additionally, each cabin and enclosed occupied space will be provided with one floor light.

Adequate lighting is to be provided in the vicinity of survival craft and the 'outside' area in way of the launching partition(s). The lighting shall be supplied from the emergency source of power.

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A. Lightning protection system is presently under consideration. Final design is to be determined.

#### 10E.02 Lightning Protection

Please refer to the attached quarters and supplied drawings by Catheco, Ltd. In addition, a Sea Water Pipework and Fitting system will be provided by Catheco Ltd. The hull exterior and system will be displayed on the vessel monitoring system. The hull exterior will be installed in accordance with the suppliers' requirements.

#### 10E.03 Cathodic Protection

### 10E CATHODIC & LIGHTNING PROTECTION

General Project Construction Specifications Van Peltier & Lowry Project Naval Architects

**II. ELECTRONIC SYSTEMS**

The vessel will be outfitted with electronics that are state of the art at the time of construction. The navigation and communication equipments are to be compliant with SOLAS and Global Maritime Distress & Safety System (GMDSS) for A3 service and other requirements as applicable.

The electronic systems will be Owner supplied, provided by Larry Smith Electronics, (LSE) Riviera Beach, FL. The Builder will coordinate engineering requirements for the electronic systems and provide support for the installation of the electronic systems as required by LSE.

This is a preliminary specification is subject to final engineering, revisions and updates in technology.

A provisional list of equipment follows for planning purposes. As contractual arrangements for with the Builder and LSE are pending, the Builder will provide a provisional budget inclusive of all support to be provided as follows:

**II.01. Electronic System Support**

The Builder will provide the following work for the electronic systems:

- Running all cables in accordance to schematics provided by LSE
- Manufacture suitable housings and control positions, as well as the cutting, drilling and tapping of surfaces to mount electronic equipment.
- Supply suitable power requirements in accordance to wiring schematics provided by LSE.
- Provide for the safe storage of all delivered equipment and to provide suitable refuse facilities.
- Provide air conditioning to the electronic cabinets.

**II.02. Electronic System Power Supply**

The main power supply will be 115/200/1/60 VAC powered from the main electrical panel and emergency electrical panel. The secondary power supply will be the 24 VDC battery bank. The DC power supply will integrate with the emergency lighting.

The Power supplies are to be sized along cable runs, with a single bus to serve run in each hull, with cross-over lines and vertical run to the wheelhouse. All power users, computers, monitors, data acquisition boxes and panels will accept and require dual voltage supply.

**II.A. CONTROL, MONITOR, ALARM & SECURITY SYSTEMS**

A Radio Zealand DMP BV vessel data acquisition and safety system capable of monitoring up to 2000 data points will be provided, to be in compliance with Class Rules and MCA requirements. The Builder will budget for 850 data points. This system will monitor additional vessel functions not addressed in the navigation light safety and control panel and will include, but not be limited to the following:

- Steering systems
- Main engine systems including pitch control
- Generator and electrical systems
- Thruster operations
- Bilge and fire pump systems
- Fuel systems
- Fresh water systems

- Hydraulic systems
- Pneumatic systems
- Lubrication systems
- Waste treatment systems
- Refrigeration systems
- HVAC systems
- Entry points & hatches as required
- BMS/BOP panel function
- Rigging loads and sailing data (estimated 50 data points)

The data acquisition system is operated over a local area network with workstations at the salon inside helm station, fly bridge helm stations, engine rooms, Captain's cabin, and Engineer's cabin. This network is to be fully redundant and can be operated from any one of the multiple computers should there be a failure.

The fire detection and alarm system is to comply with Class requirements and MCA Part 14, Fire Protection and as specified in part 07E.01 of this specification.

The monitor, control and alarm systems should meet Class Rules, MCA requirements and the standards of SOLAS regulations II-1/ Part E- and additional requirements for periodically unattended machinery spaces (when appropriate), so far as it is reasonable and practicable to do so.

#### 11.A.01 Control & Monitor System

Provisional Control & Monitor System Equipment list is:

#### 11.A.02 Control & Monitor System

A computer network system will be provided by LSE.

Part	Model	Number
Radi Zetland Bruckbox 5000 Computer Network	RAD-BRAIN-5000	1
D-Link Mxwiz WiFi Receiver	DWL-6510	1
Freeman Bird 2.4 Giga WiFi Antenna	PRE-2.4-ANT	1
LSE 3COM 10/100 24 Port Switch	LSE-3COM	1
Atlantic Modular 8 Wall Plate	MOD-8PLATE-8	1

#### 11.A.03 Security Systems

Provisional Security System Equipment list provided by LSE:

Part	Model	Number
Panasonic Outdoor Unilized PTZ Camera	PANWVCW864A	1
Panasonic Unilized W/Preset Color Camera	PANWVCS854B	2
Elbox Camera Housing	EX406-DC-RW	2
Panasonic Vandal Resistant Mini Dom Camera	PANWVCW474S	2
Panasonic WJSX150A 16x4 Matrix Switcher	PAN-WJSX150A	1
Panasonic PS Data System Controller	PANWVCU630	1
Panasonic Hard Drive/16 Channel 320GB Interface	PANWJHD560EV	1
Altronic 8 Channel Power Supply	ALTV1224-1	1



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Creston Professional Dual Bus Ctrl System	CRE-PRC2	1
Creston Single Port 16/100 Control Card	CRE-CZENBT-1	1
Creston 16 Button Custom Panel Interface	CRE-CNPI-16	2
Creston Touchpanel Control System	CRE-TPS-4500L-V13	2
Creston Back Box	BB-5000	2
Creston TPS-VTD-1 PCB Card	CRE-TPS-VTD1	2
Creston 6.4" Touchpanel	CRE-TPS-3000E	2
Creston BB-3000L Back Box	BB-3000L	2
Creston Color Touch Wall Mounted TouchPanel	CRE-CT1000	1
Creston Back Box C/P/C1000 Wall Mount	BB-1000L	1
Creston Connecting Block	CRE-CNTYSLOTX	1
Creston CNPWS-75 Power Supply	CRE-CNPWS-75	1

<b>ENTRY/EXIT CONTROL</b>		
Wegand USB Converter	WIE-OEM-WS2USB-V2	2
ProxPoint Plus RDR-6005B Reader	PRO-RDR-6005B	2
ProxKey II BDQ-1346 Card	PRO-BDQ-1346	20

<b>PAGING SYSTEM</b>		
Vistelex VS40 2W Digital Transmitter	VIS-VS40	2
Vistelex Alphamumeric Pager	VIS-VP-2	10

<b>DECK SENSORS/DOOR CONTACTS</b>		
Sure Action SU-111 Zone Processor	SUR-SU-111	12
Sure Action SU-ENHP Stress Sensor	SUR-SU-ENHP	48
Altronix 8 Camera Power Supply	ALTV1224-1	1
Door Contact Security	GRS-2003PYW GR120RPT	10

Part	Model	No.
<b>THERMAL IMAGING CAMERA</b>		
Night Vision NightNav 3000i Camera	NVT-NN3000i	1

11.4.03.01 Security Safes

The Builder will supply and install the following safes. Final locations within the interior design are to be determined. As follows:

Note: Electronic safes to have key over ride.

- Owner's main: 1 laptop sized digital code
- VIP: 1 laptop sized digital code
- Each Guest cabin: 1 'hotel' size digital code (5 total)
- Captain's cabin: 1 laptop sized digital code
- For each crew: 1 'hotel' size digital code (6 total)
- Salon Ship Safes: 1 combination safe  
1 digital safe

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11A.04 Fire Detection and Alarm System

The Builder will coordinate the installation of the fire detection and alarm system sensors with the control and monitoring system.

11B NAVIGATION AND COMMUNICATION SYSTEMS

A provisional list of equipment follows for planning purposes. As contractual arrangements for both the Builder and LSE are pending, the Builder will provide a provisional budget inclusive of all support to be provided as follows:

11B.01 Sailing Instruments

SPEED/DEPT/THWINDY, to be 11 VDC 500mA voltage converter.

Part	Model	No.
B & G Hydra 2000 Cruise Pack	BG-HY-SYST-1	2
B & G Type 213 W/40' Cbl. I-Box Masthead Unit	BGH030000	2
B & G 36M Mast Vertical MHU Cable	BGH030006	2
B & G HY 2000 Full Function Display	BG-HY-FRD-PK	3
B & G 360 Deg. Wind Angle Display	DC215640D16	3
B & G HY2020 Red Display Pack W/Switch	BG-HY2020REDS	4
B & G Air Temperature Sensor	BG-124-00-066	1
B & G Barometric Pressure Sensor	BG59006007	1
B & G Sea Temperature Probe Sensor	BG-224-00-065	1
B & G Bronze FlushMt Depth Transducer	SEN-DPT-HMU	2
B & G Bronze FlushMt Speed Transducer	SEN-SPD-HMU	1
LSE Remote Transducer Switch	LSE-XDCRSWITCH	1

11B.01.02 Radar and Navigation Equipment

Part	Model	No.
<b>RADAR</b>		
Furuno 2127 Black Box W/4' Array Radar	FUR-FAR2127BB/4	2
Furuno Gyr Interfer Board	GC-10	2
Furuno 21x7 Radar Remote Trackball Control	RCU016	4
<b>Chartplotter</b>		
Radio Zeeland Drainer 5000	RZDQ1639/24	1
Transas NS3000 ECG Chartplotting Software	TRA-NS3000	1
Transas World Collection Color Vector	TRA-3000	1
Transas AIS NS3000 Transponder Interface	TR-N-SW-18	1
Transas Radar Integrator Board	TR-N-HWO-01	1
Valhalla Flexible Grey Waterproof Keyboard	VEI-PWK	1
Valhalla 100' Wireless USB Blk Keyboard	VEI-WRPKYBD	1
Valhalla 100' Wireless RF Mouse	VEI-WRFM	1
D3S Cat 5 Shielded Cable		100'
Valhalla Kvm CAT5 Extender	KVM-EXT	1
<b>GPS</b>		
Leica MX420-8 8 port DGPS	LEIMX420/8D	2
Shackleton 4" High 1"-14 Thrld SS Mount	SH-436S	2

## GEMINI Project Contract Specifications

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<b>AIS</b>		
Leica MX531 AIS+DGPS W/Navigation System	LEI-MX531/NAV	1
Leica AIS Software License	LEI-70460	1
Shoekemeyer 4" High 1"-14 Tard SS Mount	SE-4365	1
<b>Monitors</b>		
Valhalla 15" 1500xVGA Single Monitor	VEL-15/1500	4
Valhalla 18" 650nm Daylight VGA Monitor	VEL-18/650	3
LSI Custom Vga Switching System	LSB-4825	1
<b>SONAR</b>		
Simrad S130 Black Box Over Pod Sonar	SIM-S1300	1
Simrad 30M S130 Cable	43601370000	1bd

11B.01.03 Autopilot and Gyro Compass System

Part	Model	No.
<b>GYROCOMPASS</b>		
Anschütz Standard 22 GyCom Gyrocompass	ANSMBS7213	1
Anschütz Analog Steering Repeater	ANSMBS72020	2 or 3
<b>AUTOPILOT</b>		
Anschütz PilotstarD Digital Autopilot	ANSMBS71950	1
Anschütz PilotstarD Second Star Autopilot	ANSMBS71954	1
Anschütz Rudder Angle H23 Indicator	ANSMBS71627	1
Anschütz Rudder Angle Indicator Amplifier	ANSMBS71652	1
Anschütz Follow Up W/Take Over Tiller	ANSMBS71957	1
Anschütz 2 Pos Change Over Switch	ANS4900912H	1
Anschütz Change Over Relay	ANS4900910	1
Anschütz Override Tiller System	ANSMBS72801	1
Anschütz Follow Up W/Take Over Tiller	ANSMBS71957	2
Anschütz Rudder Angle IP66 Indicator	ANSMBS71649	2
Anschütz IP66 RAILROT Dimmer	ANSMBS71119	2

11B.01.04 Compasses

Part	Model	No.
Siemens Magnetic Compass	Apr-135 G	1

11B.02 COMMUNICATIONS

Part	Model	No.
<b>GMDSS A3</b>		
Furuno GMDSS Console System	FUR-RC1815	1
Furuno VHF Remote Control Unit	FUR-RC700	1
Furuno RB780 Connector Kit	000138998	1
Furuno FAX5 Active Antenna Coupler	FUR-FAX5	1
Comrad 8' 6db VHF Antenna	AV10P8	4
Procon Flange 1" Deck Antenna Mount	FLG	4

## GEMINI Project Contract Specifications

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Control 13' 2 Hertz SSAS Antenna	AT731523-3	2
Shakespeare Swivel Kit 81-9 Mot & 40S Opt Antenna Mounts	SH-410	2
Furuno Fecomp15 SSAS Upgrade	SSASFP15	1
<b>VHF</b>		
Standard Quantum Black DSC/VHF Radio	STA-GX2360S	2
Control 8' 6db VHF Antenna	AV60P8	2
Protron Plange 1" Deck Antenna Mount	PLG	2
<b>HANDHELD VHF'S</b>		
Standard HX460S Black 5W W/H VHF	STA-HX460SH	6
Manufact Minster Charger 6 Gang Charger	MC6/HX460S	1
Icom 2W GMDSS Submersible ICH VHF	ICD-GM1500	2
<b>NAVTEX</b>		
Furuno NX500 GMDSS IMO Navtex Receiver	FUR-NX500	1
Furuno NX5 Active Antenna Coupler	FUR-NX5	1
Furuno NX500 External Data Connector	904511790	1
Control Whip Antenna	AR88-108M	1
Shakespeare 4" High 1"-14 Thread SS Mount	SH-4303	1
<b>SATCOM</b>		
Nera Fleet 77 Ingress B System	NER-F77	1
Nera Terminal Adapter	NER-TA	1
Vahoola ISDN Fleet 55/77 Modem	VEL-ISDNM	1
Nera F33 Satellite Communications System	NER-F33	1
Nera F33 Terminal Adapter Kit	NER-WC-TA	1
<b>G.P.R.P.</b>		
Nor Airborne S1520 SelfProd 406MHz GPRC	NAT-S1520	1
<b>S.A.R.T.</b>		
Nor Airborne 9GHz Portable GMDSS SART	NAT-9420	1
<b>SATELLITE TELEVISION</b>		
Orbit AL7203 80CM Satellite TV Antenna	ORB-AL7203	
Orbit Antenna DSS LNBK Kit	18-04154-1	
Orbit European Kit	EURO-ETC	
Orbit Remote Control Via Modem Kit	ORB-RCVM	

## 11.1.3 Telephone System

Part	Model	No:
<b>TELEPHONE SYSTEM</b>		
Panasonic KXTDA200 Hybrid 1x192	PAN-KXTDA200	1
Basic PBX System		
Panasonic 1 Type Extension Signaller	KXTDA0103	1
Panasonic 16 Port Analogue Line Card	KXTDA0181	1
Panasonic Option Card	KXTDA0190	1
Panasonic Remote Maintenance Card	KXTDA0196	1
Panasonic 8-Port Digital Hybrid Line Card	KXTDA0170	1
Panasonic 4-Port Dmf Phone Card	KXTDA0161	1

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Panasonic 4 Port IP Card	KXTDA0484	1
Panasonic KXT7453DigDisp24ButtonBk Spkr Phone	PAN-KXT7453D	3
Panasonic KXT7425Dig 14ButtonBk Spkr Phone	PAN-KXT7425D	9
Panasonic 900hzMulti Line Cordless Telephone	PAN-KXT7685	2
Okidata Microline 184T Serial Impact Printer	OKI-ML184T-S	1
UPS	IE/SU700NET 10/1 SU700NET 700V/450W	1
<b>CELLULAR TELEPHONE</b>		
Telstar SX3c GSM 859/1900 Cellular phone	TBL-SX3EGMSV/PTC	1
Comrad UHF/GSM Multi Frequency Antenna	AC15P	1
Procom Range 1" Dock Antenna Mount	PL0	1
<b>ENGINE ROOM PHONE</b>		
LSE Cordless E/R Phone W/Headset	LSE-CERPS	2
Anasco SKN Blue Strobe Light	ASSSKN1SL1B	2
High Output Loud Ringer	196AJ Adm1	2

**11C ENTERTAINMENT SYSTEMS**

A provisional list of entertainment equipment is as follows:

**11C.01 Main AV Distribution System**

Part	Model	No.
Kaleidescape Base System	KAL-KBASESYS	1
Kaleidescape (Set For Region 6) DVD Reader	KAL-KREADER-2000	1
Kaleidescape Movie Player	KAL-KPLAYER-2000	7
Direct TV HD Tuner	DIR-HD	3
Extron DAC YUV A Distribution Amp	60-494-01	3
Extron Composite A/V Distribution Amp	60-692-11	3
Audio Request F Series 200 Pro 3 Zone Music Server	AUD-FSERTRS-200	2
Extron MDA 5A RCA Distribution Amp	60-441-01	2
Creston Video Sensor Module Multiswitch	CRE-STVS	3
Middle Atlantic Rack Allowance	MID-RACK-JB	
Speaker Craft CR3 & Two Speaker Pair	SPE-ASM86820	2
MB Quiet 6.5" Marine Speaker Pair	MBQ-NKD116	2
Creston ColorTouch Wall Mounted TouchPanel	CRE-CT1004	
Creston Back Box CTA C1000 Wall Mount	BR-1000L	
Creston 1-Way Remote RF Receiver	CRE-CNRFCWA	
Creston Waterproof Handheld Remote	CRE-WPR-48	

**11C.02 Fiberoptic Systems**

Part	Model	No.
Claron AM/PM/CDI Controller	CLA-XMD3-RET	1
Claron Waterproof Control W/24' Cable	M301RC-RET	1
Claron 24' Extension Cable	M101RXC-RET	1
MB Quiet 6.5" Marine Speaker Pair	MBQ-NKD116	4

## CELESTONI Project Contract Specifications

Van Peltgrem &amp; Lamoignon Prévost Naval Architects

MB Quiet 10" Marine Subwoofer	NWD754	2
Chicon 320W 4/32-Channel Power Amplifier	CLA-APX480M	3
Creston ColorTouch Wall Mounted TouchPanel	CRE-CTH000	1
Creston Back Box C-DLC1000 Wall Mount	BR-HR01	1

11C.03 Main Salon Systems

Part	Model	No.
Speaker Craft CRS 8 Two Speaker Pair	SPE-ASM66H20	2
B&K Stereo Amplifier	BK-ST125.2	1
Creston 2-Way Wireless Touchpanel	CRE-STX-1700C	1
Creston Creston Volume Control Module	CRE-CZN-VBC4	1

11C.04 TV Room Systems

Part	Model	No.
NEC 61" Plasma Display	NEC-PX-61XR3A	
NEC Wall Mount Bracket	PW41K	
Sony DVP-NS575 DVD Player	SON-DVP-NS575	
B&K Audio/Video Receiver	BK-AVR305	
B&K 12-Channel Power Amplifier	BK-AV1260	
B&K 6-Channel Power Amplifier	BK-AV2600	
Speaker Craft APM8 Five Individual Speaker	SPE-ASM93875-1	5
M&K Sound 8" White Subwoofer	MKS-MX700	
Creston 2-Way Wireless Touchpanel	CRE-STX-1700C	
Creston Professional Dual Bus Ctrl System	CRE-PRO2	
Creston Single Pair 10/100 Control Card	CRE-C2ENET-1	
Creston Creston Volume Control Module	CRE-CZN-VBC4	
Creston Connecting Block	CRE-CNTRBLOCK	
Creston CNPWS-75 Power Supply	CRE-CNPWS-75	
Creston Bi-Directional RF Gateway	CRE-STRFGWX	
Creston 3 Port RS-232/422/485 Control Card	CRE-C2COM-3	2
Linksys 8-Port 10/100 Ethernet Hub	LIN-109892	
LSB Interconnect Package	LSB-ICP-8	

11C.05 Owner & VIP Suite Systems

The owner suite and VIP suite will each have identical systems as follow:

Part	Model	No. each
NEC 42" Plasma Display	NEC-PX-42XBM1A/S	1
NEC Wall Mount Bracket	PW41K	1
Samsung SV-7000W Worldwide Multi-System Converter VCR	SAM-SV7000W	1
B&K Audio/Video Receiver	BK-AVR305	1
Speaker Craft APM8 Two Individual Speaker	SPE-ASM93875-1	2
M&K Sound K9 Powered Subwoofer	MKS-K9	
Creston 2-Way Wireless Touchpanel	CRE-STX-1700C	
Creston Bi-Directional RF Gateway	CRE-STRFGWX	
Creston MP2H Control Processor	CRE-MP2H	
LSB Interconnect Package	LSB-ICP-H	



<b>FORWARD SUNDECK</b>		
Mini Count 6.5" Marine Speaker Pair	MSC-NKD11G	2
Creston 6-Button Descender Keypad	CRE-CIN-DEGW	1

11C.06 Guest Cabin Systems

The three (3) guest cabins will each have identical systems as follow:

Part	Model	Qty
NEC-Mitsubishi 30" LCD Display	NEC-LCD3000-BK	1
Premier CDM-VESA Wall Bracket	PRE-CDM-VESA	1
Samsung 100-240V 50/60 Hz SV5000W VCR	SAM-SV5000W	1
Extron SW 4AV Video Switcher	60-484-21	1
JVC Code Free Home Theater	JVC-DS-TP582	1
Speaker Craft CRS One In-Ceiling Speaker Pair	SPE-ASM86610	1
Creston Bi-Directional RF Gateway	CRE-STRFGWX	1
Creston MP2E Control Processor	CRE-MP2E	1
LSE Interconnect Package	LSE-ICP-B	1
*Note: Optional Creston STX-1700C 2-Way Wireless Touchpanel		

11C.07 Galley Systems

Part	Model	Qty
LG 23" LCD Display	LG-L2323T	1
Premier Mounts Flat Wall Mount	PRE-PWF	1
Samsung SV-5000W Worldwide Multi-System Converter VCR	SAM-SV5000W	1
Speaker Craft CRS Two Speaker Pair	SPE-ASM86630	2
Kramer 903 Mini-Amplifier	KRA-903	1

11C.08 Crew Mess Systems

Part	Model	Qty
NEC-Mitsubishi 30" LCD Display	NEC-LCD3000-BK	1
Premier CDM-VESA Wall Bracket	PRE-CDM-VESA	1
Samsung 100-240V 50/60 Hz SV5000W VCR	SAM-SV5000W	1
Extron SW 4AV Video Switcher	60-484-21	1
JVC Code Free Home Theater	JVC-DS-TP582	1
Speaker Craft CRS One In-Ceiling Speaker Pair	SPE-ASM86610	1
Creston 2-Way Wireless Touchpanel	CRE-STX-1700C	1
Creston Bi-Directional RF Gateway	CRE-STRFGWX	1
Creston MP2E Control Processor	CRE-MP2E	1
LSE Interconnect Package	LSE-ICP-B	1

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11C.09 Captain's Stateroom Systems

Part	Model	Qty
NEC-Mitsubishi 30" LCD Display	NEC-LCD3000-BK	
Premier CDM-VESA Wall Bracket	PRE-CDM-VESA	
Extron SW 4AV Video Switcher	SW-484-21	
Samsung SY-5000W Worldwide Multi-System Converter VCR	SAM-SV5000W	
JVC Code Free Home Theater	JVC-DS-TT582	
Speaker Craft CRS One In-Ceiling Speaker Pair	SPE-ASM186610	
Crestron 2-Way Wireless Touchpanel	CRE-STX-1709C	
Crestron Bi-Directional RF Gateway	CRE-STRGWXX	
Crestron MP2E Control Processor	CRE-MP2E	
LSE Interconnect Package	LSE-ICP-B	

11G.10 Crew Cabin Systems

The three (3) crew cabins will each have identical systems as follows:

Part	Model	Qty
Panasonic High-Power CD Player/Receiver w/ Auto Eject	PAN-QX-CS1100	
Speaker Craft 6.1 DT Individual Speaker	SPE-ASM186410-1	
LSE Cables & Hardware	LSE-CH-1	
LSE Satellite Distribution System	LSE-SDS-F	
LSE CATV & FM Distribution System	LSE-CATV-B	

12 Interior Concepts

Refer to the General Arrangement drawings by the Architects and Interior Designer for the interior arrangements. The client design team has provided renderings and descriptions for the concept.

Michael Leach Designs will be providing the design and specifications for the interior. Their work will be submitted under separate cover by the Owner.

12.01 General Notes

It is the intention that the interior arrangement for this sailing yacht, as illustrated in the general arrangement plan, will be fixed out in top quality yacht standards. The level of complexity is shown in attached renderings.

No space shall be left unused. Where reasonably possible, the Builder shall make all 'dead' spaces suitable to be used for lockers and storage areas by lining out and providing access for use.

All interior components, finishing and decorative materials and similar items, shall be in accordance with MCA requirements.

Special attention shall be given for protection and covering of all completed, finished or unfinished surfaces during construction.

All surfaces, which may be exposed during use, such as the insides of lockers, drawers, cabinets, etc., shall match the surrounding joinery work unless otherwise stated.

All wood joints, as in drawers, are to be dovetail, dovetailed or rabbeted, and glued in accordance with the best marine practice or as specified by the interior designer.

The Builder is responsible for providing proper stowage for all Owner supplied equipment as noted in part 16.02

12.02 Mock-ups & Samples

Mock-ups will be specified by the interior designer and owner's representative.

12.03 General Notes12.03.01 Paint Work & Protective Coatings

All paint work and protective coatings are to be suitable for the marine environment.

Colors, sizes and glass, satin or matt finishes will be selected by the Owner or his designated representative.

All woods are to have a protective coating applied. This includes all sides and edges whether exposed or hidden.

12.03.02 Bulkheads

The bulkheads and paneling will be constructed of a lightweight cored panel mounted on isolated supports as indicated in the noise and vibration drawing package. The Builder will

assume required strength for the panel area with consideration for mounting speakers, video screens and other heavy objects.

Finish wood applications will be with veneer application over light weight panels as determined by the Architect and interior vibration consultant.

#### 12.03.03 Ceilings

As per the Owner's interior designers specifications.

#### 12.03.04 Floors

As per the Owner's interior designers specifications with the following considerations:

- \* All floors will be floating and are to have removable sections where machinery or system components require access. The Builder will propose a hatch system to be approved by the Owner's Representative.
- \* The floors in the ship bulkhead side) will be radiused to the kick board for easy cleaning. Drains to the gray water system, with P-traps, will be provided in the galley and laundry floor.

#### 12.03.04.01 Floor and Bulkhead Timber

Planking for floors and bulkheads will be relatively close to knots. Plank width will be staggered in a random pattern and lengths will be maximized.

Seams for floors and bulkheads, whether butted and beveled or grooved, is to be determined.

The Builder will prepare a 1 meter x 4 meter sample of finished flooring for approval by the Owner's Representatives and interior designer.

#### 12.03.05 Interior Doors

As per the Owner's interior designers specifications.

Foiled rooms to be undercuts approximately 12 mm for ventilation.

All interior doors to have non-rattling door catch hooks.

The fire class rating for each door is contained on the Fire Insulation plan.

#### 12.03.05.01 Door Hardware

As per the Owner's interior designers specifications.

#### 12.03.05.02 Door Lock Sets

Numerous doors for the interior will be provided with lock sets. The total number and type are to be determined as per the Owner's interior designers specifications.

Note:

1. Some exterior doors and some interior doors may have remote control locks and sensors operating in conjunction with the security system.

#### 12.03.06 Plumbing Fixtures

The plumbing fixtures are to be as per the Owner's interior designers specifications.

#### 12.04 AREA DESCRIPTIONS

The interior area descriptions are as per the Owner's interior designers specifications.

#### 12.05 ENGINE ROOMS AND TECHNICAL SPACE DETAILS

The execution of the engine rooms and technical space, including lazarettes, details will be showpiece finish. All equipment will be installed to provide easy access for maintenance, service and repair. If necessary, any interference will be made removable for service and repair access.

The main engines will be ordered as "Detailed" engine, having a high gloss paint, chrome and polished stainless steel accessories. The remainder of the equipment and compartment details will be highly detailed finishes with gloss painted finishes and brass blazed, polished or plated metals.

The lazarettes and tender compartments will be finished to a high level of detail. In these 3 areas, hydraulic and other tubing and fittings will be polished stainless steels where visible. The Builder, in coordination with the Owner's Representative, will provide organized storage shelves, lockers or drawers where possible.

Other details to include:

##### 12.05.01 HEAVY MAINTENANCE ACCESS

**STRONG-POINT ATTACHMENTS WILL BE PROVIDED IN THE ENGINE ROOM DECKHEAD FOR HOISTS OF HEAVY EQUIPMENT, BEFORE THE ENGINE ROOM SOUND AND THERMAL INSULATION IS INSTALLED. LABELED ACCESS COVERS FOR THESE STRONG POINTS WILL THEN BE INSTALLED IN THE SOUND AND THERMAL INSULATION.**

There must also be sufficient space between the engine mounts and bilge framing, to remove the main engine and generator oil pans, for access to the crankshaft.

##### 12.05.02 Engine Room & Bilge Framing

All intersections of the engine room transverse and longitudinal framing will be provided with timber holes, to allow for drainage of bilge water. These timber holes should be provided in the framing from the keel, to 500 mm above the waterline.

##### 12.05.03 Engine Room Deck Grating

The engine room deck grating will be anodized aluminum plate, with a diamond pattern. These plates should be fastened to the deck grate framing with quick acting fasteners. The fasteners are to be the 1/2 turn, aircraft Dzus (pronounced Zuss) fastener. A rubber, insulating tape should be applied to the bottom of the grates, where it covers the deck grate framing to prevent metal-to-metal contact between the grate and frames.

The deck grate support framing should be of aluminum, and of sufficient cross section to support the deck grates. The perimeter framing for the deck grates will be the same color as the

deck grates. [Note: This is to prevent paint from being chipped off these frames when the grates are removed for repair/inspection.]

#### 12.05.04 Engine Room Guards & Railings

Guardsails should be positioned around all operating equipment. These railings will be mounted to the deck grate framing with quick acting fasteners, to provide easy removal during repairs.

Guards should be placed around all exposed rotating items such as belts, pulleys and couplings.

These guards and railings should be of a high quality material such as high polished stainless steel. In the interest of weight, they can also be constructed of anodized aluminum. Composites of carbon fiber/Kevlar are also acceptable materials.

The railing system above each main engine will incorporate a work bench with tool storage. Final design is to be coordinated with the Owner's Representative.

#### 12.05.05 Drip Trays & Sove-alls

Drip trays should be installed under the main engines and generators. These should be of a high quality material, but not high polished stainless steel – as they are difficult to clean. Bead blasted stainless, or anodized aluminum is recommended for this application. A composite material can also be used. Cleaning of the drip trays will be accomplished using a small hose attached to the oily water separator.

All pumps will be mounted on a sove-all tray, with at least a 25 mm lip. These trays should have drain holes and plugs. These trays can be of bead blasted stainless, anodized aluminum, or composite.

#### 12.05.06 Engine Room Piping Finish

All stainless steel piping in the engine room is to be installed with a bead blasted finish.

Steel, alloy, and bronze and copper alloy piping will be painted, with a high-gloss, two-part polyurethane paint system. All welds on this piping will be ground flush, filed and faired, before painting. Piping should protrude from threaded flanges, at least 2 threads, but no more than 3 threads.

Gaskets should be the same diameter as the flange they are installed on, and shall not protrude past the circumference of the flange.

Piping brackets and supports should be of a high quality material, but not high polished stainless, as they are very difficult to polish. Bead blasted stainless, or painted aluminum is more suitable. Piping will be insulated from brackets so as to minimize vibration to the hull or mounting structure.

#### 12.07 Fasteners

All fasteners for technical equipment and their mounting will be stainless steel. Fasteners include nuts, bolts, washers and lock washers, set cap screws, machine screws and Allen head bolts. Some equipment (such as high-pressure air compressors) are supplied with heat treated, aluminum alloy fasteners. These fasteners must be anodized.



12.08 Lighting

There must be good lighting in all technical spaces. All lighting installed in the engine room should be enclosed in splash proof fixtures. Lighting in the bilges should be in waterproof fixtures. Extra lighting should be provided at workbenches, and over the main switchboard.

This lighting will be fluorescent lighting above the deck, and incandescent lighting for the bilges. It is important to avoid a mixture of many different styles/sizes of bulbs, as storage of spare bulbs is sometimes difficult.

12.09 Manholes & Hatches

Within the engine room and technical spaces, the access hatches to all tanks will be fastened with highly polished stainless steel bolts, or with a single bolt dog. The studs for these bolts should protrude through the bolt by at least 2 threads, but no more than 3 threads. The manhole covers will be provided with handles, for easy removal, and they will be labeled, in regards to which tank they service.

12.10 Labels

All equipment should be identified with a label that is securely fastened to the equipment, or near the equipment. All junction boxes, switchboards and circuit breakers will also be labeled. These labels can be engraved, polished stainless steel, or engraved thermo-plastic. The specifications already detail that all piping is to be labeled and color-coded. SOLAS regulations for label and color-coding will be followed.

12.11 Paint

The engine room and technical spaces should be finished with a high quality, high gloss, two-part polyurethane paint system. This includes the bilges and bilge frames. For ease of maintenance/inspection/repair the paint color should be white or as determined by the owner's representative.

There shall be no sharp edges on the bilge framing, and all welds should be ground flush.

All the mechanical equipment will be painted with the same, high gloss finish. Hoses and electrical wiring will not be painted.

Toolboxes and shelving should also be painted with the same high gloss finish.

12.12 Thermal & Sound Insulation

The engine room will be isolated from the accommodation with thermal and sound insulation. In addition to the Silent Line specifications:

Some engine room piping requires thermal insulation, for efficient operation. This piping includes:

- \* HVAC chilled water
- \* Domestic fresh water (hot and cold)

The specified insulation for both these systems is 20 or 22 mm Armaflex pipe insulation. All seams in this insulation should be glued, and then these seams should be covered with a glued strip of Armaflex insulation. No self-adhesive tapes are to be used.

All bends of greater than 25 degrees are to be mitered and glued. All insulated piping that is located in the bilges should be painted with Armoflex, Armoflex HP. Note that other paint systems will damage the insulation.

- All HVAC chilled water piping will be insulated, to avoid excessive condensation.
- All domestic fresh, hot water piping will be insulated, to avoid excessive thermal loss.
- Hot water and HVAC chilled water piping should be insulated for the entire piping runs.
- The domestic fresh, cold-water piping is to be insulated in the engine room compartment, only.

#### 12.12.14. Piping Architecture

The piping runs through out the vessel must be designed and installed in a carefully organized manner. Piping runs in bilges and along bulkheads should be stacked vertically, and never horizontally. The design of the piping runs is to be finalized and approved by the Owner's Representative before the installation begins.

13. EXTERIOR CONCEPTS

The exterior concept of the yacht is to be a low profile hull with long curving profiles to complement the naked rig. The superstructure is unique, providing dramatic style to the exterior. 180° windows will provide natural light to the salon.

Hull portlights will be flush mounted. The paint surfaces are to be a high gloss finish, highlighted with highly polished stainless steel railings and deck fittings.

13.01. Decking System

The teak decks are to be 12 mm and suitable for a yacht of this magnitude. The primary intent is to minimize weight of the decking system, but also not to sacrifice the visible appearance and durability of the system. A planking styling plan will be supplied by the design team. The Builder or sub-contractor may propose alternative styles (patterns) for consideration. The following conditions will apply to the decking system:

- The planking will be a minimum of 63.5 mm (2.5") wide and will be of a natural finish with black caulking.
- Butt end joints are to be staggered and consistent between port and starboard sides.
- Margia boards are to be 75 mm (3") wide.
- Hatch and hardware boards are to be 75 mm wide.
- Decking will be pushed into the margin boards where necessary.
- The transition under kick spaces is to be a radiused to a higher level than the planking.

The teak decking will not come up to the walls or edges but garter drainage will be provided; locations and details to be determined on a drawing from the architects.

13.01.01 Decking System Areas

The decks have the following wooden areas:

- |                    |                    |
|--------------------|--------------------|
| • Flybridge deck:  | 92 m <sup>2</sup>  |
| • Forward terrace: | 26 m <sup>2</sup>  |
| • Aft stairs:      | 30 m <sup>2</sup>  |
| • Main deck:       | 126 m <sup>2</sup> |
| • Total area:      | 274 m <sup>2</sup> |

13.02. Flybridge

Sailing helm and operation of the vessel's sailing systems are located on the Flybridge. Port and starboard helms will be equipped to monitor and control the vessel under sail and power. The helms will also be the main maneuvering stations.

The helm consoles will be a low profile with vertical face for mounting of control screens and options. The flat section will have sailing and maneuvering controls. There will be a center mounted gyro repeater. A detailed plan will be provided by Architects.

The upper deck will also be used for entertaining and relaxation. Access from the main deck will be up a port side stairway. It will be enclosed by a closed bulwark, which tapers off to a low profile.

13.03 Forward Deck

The forward deck provides a private exterior lounge area for the owner and VIP cabins. Between the hulls, extending to the forward beam, is a web decking providing sail handling area. Just forward of the nacelle, the mooring equipment is covered with a deck that forms a terrace for the owner's suite.

13.04 Side Deck

The deck is arranged with flush cabin hatches and deck lockers for fuel fills, as described in "105\_deck\_hatches\_and\_lockers" drawing.

13.05 Aft Main Deck

The aft main deck is arranged for relaxation and entertaining. Forward, there will be wide salon doors opening to the aft deck. There will be a large fixed sun bed with lockers under with the possibility to partly transform it into an up facing seating. There will be a selection of loose dining tables and chairs that can be utilized to suit the entertaining mode. The tables will be hinged to function for cocktails or dining. A good portion of the forward aft deck area will enclose with enclosures and be air conditioned when desired.

There will be side deck craning lockers with various storage and technical equipment areas.

The main deck overhead will be made from lightweight panels and arranged with direct, indirect lighting and acoustical systems to be determined.

Large flush deck hatches are positioned for access to the tender locker, and other storage uses.

13.06 Railings, Stanchions & Wires

Railings and stanchions are described in "Gem\_104\_stanchions & railing". Architects drawing.

Top railing wire to be a minimum of 1000 mm above deck level. Design detail to be defined.

- All railing is to be 36 mm polished 316L stainless steel and styled according to the drawings.
- Pulpits will have a teak-grating seat on the mid railing. Design detail to be defined.
- The main deck stanchions will be 32 mm diameter polished stainless steel lifeline stanchions with holt on top, mounted on the side deck, at max intervals of 2200 mm in bulkhead spigot bases. All bases are to be fitted with drains as appropriate to prevent the collection of water.
- There are to be port and starboard lifeline gates with (4) stanchions and bruxes each side.

13.07 Air Inlets and Outlets

Special attention should be paid to the integration of all air in and out of the vessel.

The final designs are to be approved by Architects.

13.08 Hatches

Deck hatches will be flush mounted, and are listed in "Gem\_105\_deck\_hatches\_and\_lockers" Architects drawing.

13.09 Awnings and Dodgers

Awnings and dodgers will cover the flybridge, as described in "Gen. Plan flybridge, minor" Architects plan.

13.10 Upper Deck Stairway

The stairway to the upper deck will be fitted with indirect courtesy lights and handrail railings. Deck boards will be covered with the deck system timber and styled consistent with the decking system. Indirect lighting will be let into the underside of the stair frame.

13.11 Exterior Furniture

The exterior furniture will be supplied by the interior subcontractor. Inventory is to be determined.

13.12 Jacuzzi

A "Bradford Spa" or equivalent spa will be fitted on the upper deck. The spa will be built to the dimensions as provided in the plans and arranged with:

- Water heaters
- Fresh water fill connections
- Circulation filters and massage jet systems
- Gutter water catch.
- Side seating
- Internal reading
- Underwater lights
- Drain to the hull tank as required by the Rules

**14. NOISE & VIBRATION CONTROL: STRUCTURAL FIRE PROTECTION**

The complete package on noise and vibration control has been designed and provided by SilentLine BV. This package contains the following items:

- Complete set of preliminary detail insulation installation drawings.
- Preliminary weight calculation.

The Builder may select SilentLine BV, or another noise and vibration consultant in work with, but with the understanding that the noise and vibration targets are to be achieved. SilentLine BV states they will guarantee the sound and vibration targets if under contract to the Builder.

**14.01 Noise Targets**

The following noise targets are to be achieved.

**14.01.01 Noise Targets at Anchor Condition**

Measuring conditions:

- Measuring position in the center of the cabin or room at 1.60 meter above floor level.
- All doors to be closed.
- Cabin or room completely finished.
- Air conditioning at normal speed (fan speed 2).
- Normal secondary machinery operational.
- House hold equipment not taken into account.
- Sound sources other than the generator set, normal secondary machinery and air conditioning is not taken into account.
- Sea state 1
- Wind speed (Beaufort 3)

At anchor condition, noise targets to be achieved [dB(A)].

• Salon :	38 ~ 40
• TV room :	40 ~ 42
• Owner & VIP Suite:	36 ~ 38
• Guest cabins, port hull:	38 ~ 40
• Crew cabins, starboard hull:	42 ~ 45
• Galley:	45 ~ 48 (extraction fan not running)
• Crew mess:	45 ~ 48

**14.01.02 Noise Targets at Cruising Condition (30% MCR of the main engines)**

Measuring conditions:

- Measuring position in the center of the cabin or room at 1.60 meter above floor level.
- All doors to be closed.
- Cabin or room completely finished (carpet, beds etc.)
- Air conditioning at normal speed (fan speed 2).
- Normal secondary machinery operational.
- House hold equipment not taken into account.
- Sound sources other than the main engines, gearboxes, propulsion propellers, generator set, normal secondary machinery and air conditioning is not taken into account.
- Sea state 1



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- Wind speed (Beaufort 3)
- Rudder angle maximum 2 degrees.

Cruising condition, noise targets to be achieved [dB(A)].

• Salon :	54 - 56
• TV room :	56 - 58
• Owner & VIP Suite :	48 - 50
• Guest cabins, port half aft :	56 - 58
• Guest cabins, port half fwd :	54 - 56
• Crew cabins, starboard hull :	58 - 60
• Galley :	58 - 60
• Crew mess :	56 - 58

14.01.03 Acoustic Privacy

The requirement is for excellent acoustic separation between the various partitioned areas. Noise reduction from one space to its adjoining space is to reach the isolation requirements of the "Sound Transmission Class" (STC) as given below. Achievement of the required isolation dictates special construction (insulated walls, gasketed doors and silenced vent passages). All privacy partitions must be sealed to the deck head and penetrations traversing privacy bulkheads must be sealed.

Between compartments:	STC:
• Crew : cabin to cabin	35
• Crew : cabin to corridor	35
• Owner - VIP : cabin to cabin	40
• Owner - VIP : cabin to corridor	35

The above mentioned STC-targets are to be studied by means of the SEA model. The composition of the separation wall(s) are added to model as well as the cabin dimensions, finishing and reverberation time. This means that eventual modifications can be added in an early design stage.

14.02 PRELIMINARY Insulation Plans

The following (attached) preliminary insulation drawings have been designed by Silen Line BV. Any alterations to the schedule or substitution of materials are to be approved by Silen Line BV and the Architect. A final insulation plan will be designed following the completion of the Statistic Energy Analysis (SEA) study.

14.03.01 Lazarettes and Tender Compartments

The lazarettes will be insulated from thermal point of view. See detail insulation drawing "G-Ld-1\_v1\_tender compartment" and "G-Ld-8\_v1\_diving compartment".

The tender compartment will not be insulated.

14.03.02 Engine Rooms

These areas are insulated from noise, thermal and fire point of view (A-60). See detail insulation drawing "G-Ld-4\_v1\_engine room" and "G-Ld-12\_v1\_engine room".

14.02.03 Crew Quarters

These areas are insulated from noise point of view. See detail insulation drawing "G-Mid-6\_v1\_crew mess room"

14.02.04 Laundry

These areas are insulated from noise and thermal point of view. See detail insulation drawing "G-Mid-7\_v1\_laundry and crew forward"

14.02.05 Galley

These areas are insulated from noise, thermal and fire point of view. See detail insulation drawing "G-Mid-8\_v1\_galley"

14.02.06 Owner & VIP Staterooms

These areas are insulated from noise and thermal point of view. See detail insulation drawing "G-Mid-9\_v1\_VIP bedroom" and "G-Mid-5\_v1\_owner bedroom"

14.02.07 Salon & TV Room

These areas are insulated from noise and thermal point of view. See detail insulation drawing "G-Mid-3\_v1\_salon" and "G-Mid-2\_v1\_living room"

14.03 Vibration Targets:

The maximum vibration level, measured at the ship structure, may not exceed the ISO level of 4 mm/sec [RMS] with the yacht cruising at 80% MCR output.

The maximum vibration level, measured in the accommodation areas (tables etc. not included), may not exceed a level of 1.0 mm/s [RMS] with the yacht cruising at 80% MCR output. At anchor condition, the maximum vibration level may not exceed 0.5 mm/sec [RMS].

Structural analysis has to be performed by Silent Line BV, or the Bidder's selected consultant, using Finite Element Analysis software (Nastran under Windows, or equal) to avoid resonance and to ensure the above mentioned allowable vibration level of 4 mm/s. This study is combined with mobility calculations on the engine and gearbox foundation, framing underneath the generator sets and the interaction between the propulsion propeller(s) and the hull plating above the propeller(s).

Cabin surrounding (floating floor, liners, separation walls and ceiling) must be installed as a box-in-box construction meaning that a direct contact between the structure and the cabin surrounding is avoided. This is to ensure the maximum allowable vibration level of 0.5 mm/s [RMS].

Whirling and axial vibration calculations are also foreseen using the above mentioned Finite Elements Analysis software.

14.04. Materials:

The materials and surface areas are as listed in the attached spreadsheet and the installation is to be in accordance with the drawings as listed in part 14.02.

The material lists exclude the interior items as listed below:

- Hull liners,
- Bulkhead Liners,
- Separation walls,
- Ceiling

14.05. Supervision During the Build Stage:

Supervision for a qualified person is required for the installation in order to ensure that the noise targets will be achieved. If under contract to the Builder, Silentline BV will provide the following services:

1. Visits to the yacht, during the entire building stage, are included in our package. The following main visits are:

During the building stage:

- Measurements on the ship structure are foreseen in order to check the natural frequencies of local structures like bulkheads, deck structures etc. This to make sure that the vibration targets as stated in topic 14.03 are not exceeded.
- During the demount of the insulation system:
- Visits are foreseen in order to make sure that all materials are installed in accordance with our detail insulation drawings. This to make sure that the noise targets as stated in topic 14.01.01 – 14.01.02 are not exceeded.

2. During the demount of the interior:

- Visits are foreseen in order to make sure that all materials are installed in accordance with our detail insulation drawings. This to make sure that the STC targets as stated in topic 14.01.03 are not exceeded.

14.06. Attachments

The following documents are attached and are considered part of this specification:

- Preliminary\_Lower deck\_weight\_SL\_version03\_weight
- Preliminary\_Main deck\_weight calculations\_v3

15 DECK EQUIPMENT

The deck equipment is to be according to deck layout proposal by the Architect. All deck fittings are to be installed with adequate stiffeners and backing plates to support the loads and be watertight.

All deck equipment is to be of a single manufacturer with a constant type of finish, i.e.: polished stainless steel. Fasteners should be resistant to corrosion and to be Allen head or square drive.

15A WINCHES15A.01 Anchor Winches

See part 07A and drawing: *Gem\_T02\_anchorling\_arrangement*

15A.02 Mooring Winches

See drawing: *Gem\_T03\_mooring\_arrangement*

There will be four (4) mooring winches mounted bow and stern, port and starboard, of suitable size for handling the mooring lines. These will be located in enclosed lockers along with the cleats. The lockers will have red lights for illumination.

MOORING WINCHES

	Position	Nom Rating	Power	Weight
1 Muir VC8000	Port aft	3636 kg	Hydraulic 280psi @ 175 bar	121 kg
1 Muir VC8000	Starboard			
1 Lewmar 88HST*	Port bow	4545 kg	Hydraulic 105 bar	54 kg
1 Lewmar 88HST*	Port bow			

\* To be also used for spinnaker sail handling

15A.03 Sailing Equipment

The winches will be hydraulic. Mast and deck mounted winches will have stainless steel bases and self-tailing cups. See drawing *Gem\_T03\_deckplan* for details.

Manufacturer: Lewmar

Number	Position	Location	Model	Power	Weight
2	Soleat Sheet	In coach roof	LMS 125	Hydraulic	365 kg each
2	Staysail Sheet	In coach roof	LMS 125	Hydraulic	387 kg each
1	Mainsail Sheet	TBD	LMS 111	Hydraulic	195 kg
1	Mainsail Halyard	Fore cross deck	LMS 125	Hydraulic	387 kg
2	Portails Sheets	Upper deck	122 AUSTON	Hydraulic	202 kg each
2	Mast	On mast	122 AUSTON	Hydraulic	202 kg each

Note that the foresail and mainsail halyards will not be loaded while sailing. The halyard winches will hoist the sail and the headboard car will be locked in place. Luff tension will be set from deck level via a hydraulic Cunningham.

#### 15A.03.01 Boom Controls

No.	Purpose	Type	Location
1	Mainsail topping lift	A250-0440XX	Internal boom
1	Mainsail outhaul	A250-0900XX	Internal boom at gunswatch
1	Mainsail traveler	A254-1100XX	Upper aft deck casing
1	Boom paverter	A250-0900XX	Internal boom

#### 15A.03.02 Winch Controls

Captive reel winch control positions are at each exterior helm station and locally at the winches.

All mast and running winches are to be foot switch controlled, located at each winch station. Winch controls for the flybridge duck will be recessed into the coverings.

Each flybridge helm will have an emergency stop button for the hydraulic winch power pack.

#### 15A.03.03 Winch Power

Power is to be provided by a custom hydraulic power pack system as described in the part 07H.03 of this specification.

### 15B BLOCKS & HARDWARE

#### 15B.01 Block List

All blocks and sailing hardware are listed in the attached spreadsheet: *Gemini\_hardware\_listng\_Pxx*.

### 15C HATCHES, WINDOWS AND PORT ROLES

The windows, hull ports and cabin house ports are to be in accordance with Class and MCA requirements.

#### 15C.02.01 Structural Glass

Structural glass is listed in part 02

Main salon windows

No	Average Height	Area	Thickness	Radius of curvature	
				Bottom	Top
	mm	m <sup>2</sup>	mm	m	m
2	850	4.8 each	Tbd	29.2	29.6
2	1100	2.9 each	Tbd	2.47	2.38
2	1200	3.8 each	Tbd	23.6	24.6

**Forward windows**

No	Height	Width	Total Area	Thickness
	mm	mm	m <sup>2</sup>	mm
3	1100	1940	13	Tbd

**Aft salon**

The aft salon bulkhead will be all glass with a combination of fixed and sliding panels.

No	Height	Width	Total Area	Thickness
	mm	mm	m <sup>2</sup>	mm
	2200	8350 full	16.4 total	Tbd

**15C.02 Portlights & Portholes**

Portlights and porthole locations are as per drawing: *Gem\_106\_aft\_portlights*

**15C.03 Window Shading**

All main salon, upper deck salon and owner's suite windows and door glass shades will be specified by the Interior Designer.

**15C.04 Window Wipers**

All forward pilothouse will be provided with electric window wipers and wiper system in way of the interior helm station.

- Manufacturer: Hapworth
- Type: 300MM panoramic sweep
- Number: 6
- Power: 120/60
- Weight: 8 kg each

**15C.04 Deck Hatches**

All deck and locker hatches are listed on drawing: *Gem\_105\_Deck Hatches & Lockers*.

- All composite hatches are to be flush with concealed hinges.
- All lens hatches are to have stainless steel frames
- Manufacturer: Freeman Marine or equal

**15D COVERS, BIMOVS, DODGERS & CURTAINS****15D.01 Main Deck Curtains**

The aft main deck is to be enclosed with lissacglass curtains and will be an air conditioned space (port, starboard and aft enclosure). The side curtains should extend from the aft roof bulkhead 5.2 m.

The curtains should be flaring into the overhead.



The client is also considering a roll down Venetians blind type protection at the furthest aft end of the flybridge to provide shade to main deck cockpit. The design will be provided by the Architects.

#### 1SD.02 Flybridge Bimini

See drawing: *Gem\_T12\_flybridge\_bimini*

A hard top bimini will protect two thirds of the flybridge deck area. It will be built in composite with aluminum support pillars as per the Architects drawings.

The Builder will propose a removable enclosure system for the top.

#### 1SD.03 Flybridge Dodgers

The primary function will be to protect the helm stations from wind and rain.

The dodgers will fold up into the bimini. It will be built according to the Architects design.

#### 1SD.04 Sail Covers

The lead sails and mainsail will be provided with sun covers.

Color and materials to be the Owner's choice.

#### 1SD.05 Protective Deck Runners & Covers

Deck runners are to be provided to protect the decking. There will be a fastening or securing system provided that is to be discrete. Runners will be provided for:

- Upper deck
- Main aft deck traffic areas (defined as direct paths from ladders and passageways)
- Main salon & TV room
- Forward underway passage way and stair

Color and materials to be selected.

### 1SE DECK HARDWARE

#### 1SE.01 Stanchions

##### 1SE.01.01 Materials

The Builder will quote for 2 stanchion materials:

- Option 1: Polished 316L Stainless steel
- Option 2: Titanium

##### 1SE.01.02 Main Deck

See drawing: *Gem\_V04\_stanchions & railings*.

The main deck stanchions will be 32 mm diameter with ball on top, mounted on the side deck, at max interval of 2200 mm.

There are to be port and starboard lifeline gates with (4) stanchions and braces each side. Top course to be a minimum of 1000 mm above deck level.

#### 15E.01.03 Upper Deck

See drawing: *Gem\_V04\_stanchions & railings.*

The upper deck will be surrounded by a molded bulwark with railings to a total height of 1000 mm. Railing section will be of suitable size and section for aesthetics. Details to be approved by the Owner.

All stairway railings are to be 38 mm diameter to a total height of 1000 mm.

All stanchions will be mounted in or on insulated spigot bases to protect the paint finish and prevent contact between the dissimilar metals. All bases are to be fitted with drains as appropriate to prevent the collection of water.

#### 15E.02 Pulpits

Bow pulpit, 2, are to be made out of 38 mm tubing as per the drawing. Pulpits will have a tank seat on mid railing.

#### 15E.03 Aft Railings

Aft railings are to be made out of 38 mm tubing, suitable oval section or tank cap rail. Railings are to include brackets for MOIM and Horseshoe buoy.

Aft railings will be fitted with transom openings as shown in the drawings.

#### 15E.04 Railing wire:

The vessel is to be surrounded with railings in accordance with the Rules. A minimum of 3 courses of railings are required.

- Upper wire is to be -10 standard rod
- Lower courses is to be -4 standard rod
- Railing passages will be uncoated wire and have pelican hooks or other suitable opening fixtures
- Rods and wires are to have end fittings and tension adjustment

#### 15E.05 Deck Fittings & Mooring Hardware

Deck fittings and mooring hardware are shown on drawings:

*Gem\_V03\_Deck Plan and  
Gem\_T03\_mooring\_arrangement*

#### 15E.06 Netting

Netting consisting of 8mm webbing will be fitted between each deck and longeron and between the forward beam and the longeron.

A suitable perimeter fastening system will be provided for the full perimeter of the netting.

#### 15E.07 Other Fittings

Other fittings will be provided as follows:

- Stainless steel bow or eyes in front of the mast for hooking free balyards.
- One (1) SS base socket on the upper deck aft railing with one carbon fiber flagpole.
- SS drain fittings in the flybridge deck, main deck and forward well deck as necessary.
- Eye fitting at each forward beam hull foundation for attachment of the anchor bridle.

Note that there will be other miscellaneous fitting required.

## 15F BOARDING LADDERS

### 15F.01 Passerelles

See arrangements on drawings: *Gen\_T04\_aft passerelle* and  
*Gen\_T11\_side passerelle*

The yacht will be provided with two carbon fiber (2) hydraulic passerelles that retract into the transom and starboard side. The passerelles will be provided by C-Quip. The passerelles will be fitted with:

- Call button
- Courtesy light
- Removable Railings
- Teak walkway

#### 15F.01.01 Starboard Side Passerelle

The starboard passerelle will be retracting into the side and slew to 80° fwd and aft. The passerelle should articulate to -10° for use near the waterline or at facilities, which are higher. It should therefore be equipped with pivoting steps.

#### 15F.01.02 Port Aft Passerelle

The port passerelle will be retracting into the transom. The passerelle should extend a minimum of 3 m and articulate to +/- 15-25° for use near the waterline or at facilities, which are higher.

16. INVENTORY16.01 Builder Supplied

The following additional inventory will be provided by the Builder and installed or placed on board with appropriate storage arrangements:

- SCUBA Compressor as listed in part 07F.03
- Safety equipment as listed in part 17
- Mattresses by Handcraft Mattress Co., or equal; as sized in the interior concepts.
- Two (2) outboard motor storage racks in stern lazarette
- Two (2) busun's chair with tool pockets provided
- One (1) swimming ladders, made of stainless steel with tank steps for aft platform which locks into place, to ensure no movement
- Two (2) telescopic boat hooker made of aluminum
- Two (2) anchor rode hridals at the bows with chain clew for the anchor chain. Ten (10) appropriate sized inflatable fenders
- Ten (10) mooring lines sized to the satisfaction of the Administration. Suitable eye splices will be at one end for the mooring arrangements. Ends will be finished to prevent fraying.
- Spare parts inventory for main engines, generators, water makers, feed & purifier systems, waste treatment systems, hydraulic systems and other spare parts to be recommended by the equipment suppliers.

16.02 Owner Supplied

The following items will be supplied by the owner and installed by the Builder. The Builder shall be responsible for unloading, unwinning, receiving, storing in a suitable manner and installation on the vessel at the proper times these items and any other articles consigned to the Builder for the Owner's account for use in the vessel.

That which is sent to the Builder will be installed by the Builder with all necessary foundations, connections and related equipment. Suitable lockers, drawers or chocks shall be provided as required. No additional charge shall be made for this service.

Only the items specifically listed below will supplied by the Owner and anything else required for a complete vessel of the type described shall be provided by the Builder.

- Electronics as listed in part 11
- Loose deck furniture listed in part 13 Exterior Concepts
- Sails, as listed in part 22
- Dive equipment as listed in part 23
- Tenders as listed in part 24
- Exercise equipment
- Type III, IV and V personal flotation devices for small craft
- Safety harnesses
- Other water toys TBD
- Tools for deck and engine rooms
- Cleaning equipment
- Required Regulatory publications, paper charts, guides, etc.
- Desired audio, video and printed media
- Medical kits and inventory
- China, table settings, flat ware, crockery
- Pillows, bedding, linens, towels, etc.
- Crew uniforms

17 SAFETY EQUIPMENT17.01 General

The life saving equipment inventory is to comply with MCA requirements with the following minimum equipment provided:

17.02 Life Rafts

Life rafts will be installed in accordance with drawing: Gem\_CB1 & CB2\_Safety\_plan. Dimensions and weights are of the container pack.

- Manufacturer: Viking
- Model: 10 DK
- Number: Four (4)

Each life raft to be fitted with SOLAS "A" pack. A placard giving instructions for launching and inflating the life rafts must be posted in a conspicuous place.

Emergency lighting of the life raft stations will be provided as required by the regulations.

17.03 Personal Flotation Devices (PFDs)

The Owner will supply personal flotation devices.

Storage of PFDs is to be in accordance with MCA regulations.

17.04 Safety Harnesses

Safety harnesses will be Owner supplied items.

17.05 Ring Life Buoy

Three (3) life buoys, or number as required by MCA regulations, are to be provided and mounted in accordance with MCA regulations.

17.06 Flares

Distress signals will be provided in accordance with MCA regulations.

17.07 Man Overboard Systems

There will be a man overboard system(s). The overboard modules, in a container must location to be determined.

- Manufacturer: TBD
- Type: TBD
- Number: TBD

17.08 Medical Kit

The medical kit will be Owner supplied.

**19 PAINTING WORK**

The exterior and interior paint systems are to be an International Paint system from filler and primer systems to the finish coats. If the Builder or paint contractor prefers an alternative system, this is to be approved by the Owner's Representative.

Paint colors are to be selected by the Owner. Presently, the topsides will be a dark navy blue and super structure (s.s.) white. Boot top and other accents are not yet determined.

In consideration of developing paint technology, the Builder, and the Builder's paint subcontractor, if applicable, will consult with the paint system supplier for the best type of system to apply. The Owner's Representative may provide an independent paint consultant to review, inspect and recommend on the paint system and process.

Any exterior finish coats are not to be mechanically polished.

The quality of the exterior paint system is to be a *Super Yacht Finish*, as noted in the below table. The Builder will provide the Owner's Representative with a sample of high gloss vertical and horizontal surfaces, plus a proposed standard to be within the table.

Hull Area	Gloss range See notes	Dust Particles per sq decimeter	Surface texture	Fairness	Sags & Runs
Exterior topsides Outboard and inboard surfaces and super structure	87-90% @ 60°	8 @ 0.3 mm	<15 or Reference panel	Judged throughout construction process	Not allowed except with approval of owner's representative
Deckhouse tops	85-90% @ 60°	12 @ 0.3 mm	15-20		Same
Finest bottom	80-85% @ 60°	10 @ 0.3 mm	8-12		Same
Inspection Method	Gloss meter	Magnified visual	Visual comparison	Visual	Visual

**Gloss Range Notes:**

1. Gloss measurements are to be taken over 5% of the total surface area, divided into 1 m<sup>2</sup> sections.
2. Each 1 m<sup>2</sup> section will be measured at 5 spots and the average calculated.
3. Each spot will have the average of 3 readings taken within 5 mm.
4. The surface areas will be divided over types of surface: horizontal, vertical, sloped, exposed, non-exposed and deck areas (ie: upper deck, main deck, etc.)
5. None of the 5 spot averages shall be below 95% of the specified gloss value. One of each of the readings for a spot average may be below 95% of the specified gloss value, but not below 80% of the specified value.
6. For each 1 m<sup>2</sup> area, the spot averages shall not be below the specified gloss value.

**19.01 Painting Work Hull Inside**

All surfaces are to be dry ground to remove all sharp edges and washed to remove contaminants.



All wood is to be fully sealed or suitably treated on all sides to prevent ingress of moisture and rot.

All woodwork that has to be varnished will be varnished with two component varnish, Finish coat to be as directed per the designers drawings.

All interior cabin area paint work is specified in part 12 Interior Concepts.

- |                       |   |
|-----------------------|---|
| • Hull Inside:        | Not painted behind insulation.<br>All bilges and other areas are painted. |
| • Engine room:        | Not painted behind insulation.<br>All bilges are painted.                 |
| • Sump Tanks:         | Ceramikote  |
| • Water Tanks:        | Ceramikote  |
| • Fuel and oil tanks: | Not coated.   |

#### 19.01.01 Hull Interior Colors

- |                            |                               |
|----------------------------|-------------------------------|
| Lockers above deck plates: | Off white, or Owner's choice  |
| Bilges below deck plates:  | Light gray, or Owner's choice |

#### 19.02 Hull Exterior

The following surface areas are preliminary:

- |  |                 |               |
|--|-----------------|---------------|
| • Hull below water line:                   | 360 sq meters   | 5,382 sq ft.  |
| • Hull and superstructure above waterline: | 1,263 sq meters | 13,616 sq ft. |
| • Wet deck tunnel:                         | 266 sq meters   | 2,863 sq ft.  |

#### 19.02.01 Hull, below waterline, Surface Preparation - Aluminium Substrate

- 1 Prior to sandblasting, it is imperative to clean all surfaces with Interlux 202 Fiberglass Solvent Wash for the removal of wax, silicone and other surface contaminants. Using cleaned dry rags, saturate with Interlux 202 Fiberglass Solvent Wash and scrub the surface thoroughly. Before the solvent dries, wipe up completely with separate clean, dry rags. Work in small, easily reachable areas at a time. Repeat this procedure if necessary to ensure all surface contaminants are properly removed.
- 2 An efficient way to tell when all contaminants residue has been removed is by spraying the entire hull with water. If the water beads up, contaminants are still present. Repeat step 1 procedure and until all the water "sheets" completely over the surface.
- 3 Sandblast all aluminium surfaces to clean bright, near white metal finish with medium mesh Silica Sand. Blow down the entire substrate with a clean air line using a clean rag to remove all blasting residue. *Within (1) one hour of sandblasting, immediately apply the first coat of Xpox step two below).*
- 4 If sandblasting is not possible, disk grind the entire underwater hull surfaces with 24 grit grinding discs. Thoroughly wash all structural surfaces once again with Interlux 202 Fiberglass Solvent Wash using the "two rag wipe down method" and changing rags frequently.

19.02.02 Application procedure

The application procedures will be determined by the paint system supplier in cooperation with the Owner's Representative and his consultants.

19.02.03 Underwater Hull Fairing

If extensive underwater hull fairing is necessary, it will be a high weight system, applied with a proper tie coat in agreement with the Architect.

19.03 Hull Outrigs, above waterline

19.03.01 Surface Preparation - Aluminum Substrate

The application procedures will be determined by the paint system supplier in cooperation with the Owner's Representative and his consultants.

19.03.02 Topsides

The application procedures will be determined by the paint system supplier in cooperation with the Owner's Representative and his consultants.

19.04 Varnish Work on Deck

Varnish work on deck to be full grain, hi gloss finish.

20 SPARS

Please refer to the Architects drawings for accurate dimensions of the spars, sail plan and rig loads – drawings:

- *Gen\_Sail Plan*
- *Gen\_Rig Loads*
- *Gen\_Deck Plan, Fittings & Hardware Plan*

20.01 Principal Dimensions

The preliminary sections are as follows:

- Overall length: 33000
- Section depth: 1100
- Section width: 700

The following are extracted from the sail plan:

- P 47275
- E 15485
- i 45050
- J 12635
- $I_y$  7.6e 14 N.mm<sup>2</sup>
- $I_z$  6.3e 14 N.mm<sup>2</sup>

20.02 General Concept

The spar and boom will be constructed of carbon fiber. The mast will be without spreaders, have a tapered top section and have a baf & socket heel fittings with pivot stops. Note that the rig will be jacked from the deck and appropriate structure is required.

The boom will have an internal hydraulic topping lift and outhaul system with separate chambers for hydraulic, electric and rigging systems. The booms will be a 'park avenue' style to contain the sail when reefed or fished.

All hardware is to be installed with suitable insulating or barrier materials to prevent corrosion between the components.

The mast is to be arranged with steps and a platform at the height of the gooseneck.

The finish of the mast and boom are to be to the owners' choice of colors.

Shrouts and Halyards are listed in the part 22 Running Rigging.

20A MAST COMPONENTS20A.01 Masthead

Carbon fiber tapered top section and masthead with: (to be confirmed with mast builder)

- One sheave for main halyard (backside)
- Two sheaves (port and starboard) for boom chair lines (port and starboard)
- Three aft lug for topping lift, main halyard purchase for point, and spare
- 2 sheave blocks for burgee halyard

- 2 eyes for safety lines
- 4 retractable steps for masthead access.
- Ground attachment for lightning rod

20A.02 Mast Fittings & Hardware

The mast will be arranged with: (to be confirmed with mast builder)

- Gennaker lug tang with sheave and sheave box for gennaker halyard.
- Spinnaker lug tang with sheave and sheave box for spinnaker halyard.
- Headstay lug tang with sheave and sheave box for solent halyard.
- Inner forestay lug tang with sheave and sheave box for staysail
- Storm sail lug tang with sheave and sheave box for storm sail
- Two rails (port and starboard) with one traveler on each for gant line
- Two hydraulic (or manual) bearsail halyard tensioners (solent and staysail)
- Shroud attachment.
- Port and starboard sheave boxes for lazy jacks.
- Cowling for port and starboard foredeck lights
- Cowling for deck lights for owner's terrace and ground jackle
- Internal vent pipe(s) for gray and black water systems
- Electrical control and connection box for wiring and electronics
- 2 mount brackets for radar arrays
- Required SS hydraulic fittings for boom hydraulics
- Sail track with headboard, headboard lock system and battery car system. Note: headboard to lock at full lift and reef point stations to remove load from halyard.
- Ground conductor for lightning protection – flat copper strap
- Lightning rod
- Boom gooseneck fitting
- Halyard and reef lines exits with SS chafe protection as per <Gem\_deckplan>
- Refer on drawing <Gem\_hardware\_listing> to part 15-Deck Equipment, for clutch, jammers and cleats on mast

20A.04 Mast Lighting

Lighting is to be wired and installed to comply with International Regulations For Preventing Collisions At Sea, 1972, as amended. Lights mounted on the mast column to have suitable mounting brackets and protective guards. Light particulars are listed in part 10A.04 of this specification. The following provisions will be made for the electrical options listed below:

- White strobe light 360°
- Red 360° masthead light.
- Green 360° below masthead red light (night sailing)
- Steaming light on mast front
- Port & starboard forward deck lights
- Port & starboard anchor gear area deck lights
- Two under boom deck lights for fly bridge
- Controlable spot lights

Provisions to be made:

- Provide protective guards, supports and brackets
- Pulling of cables in mast
- All lights and their wiring

- All cables in crossfall

#### 204.05 Boom Components

The boom is to be carbon fiber with tapered end and fitted with:

- Gueseneck fitting on a hydraulic cylinder fixed on the mast ( to push boom from mast for overhaul tripping )
- Separate chambers for lines and electric wiring
- Separate chamber for stowing spare sail battens
- Three (3) inboard reef point systems with internal hook for each reefing line
- Captive winch for a 4:1 purchase mainsail sheet
- Internal boom preventer hydraulic cylinder
- Internal topping lift hydraulic adjustment
- Six (6) side lugs for lazyjack system
- Internal deck lights (2)
- Junction box for lights

#### 208.01 Longeron

See drawing: *Gem longitudinal & transverse fwd beams*

The longeron is to be constructed of carbon fiber.

- Length: 8110 mm
- Section: 240 to 380 mm
- Weight: TBD

Fittings:

- Welddeck chainplate
- Forward transverse beam attachment
- Maststay attachment
- Stayrail attachment
- Genoaer attachment
- Storm sail attachment
- Chambers for hydraulic lines and electric wiring
- Ground strap for headsails
- Webbing attachment
- Non-skid walking surface
- Access plates for internal systems
- Through beam inlet an outlet for spinnaker tack line adjustment, genoaer and stayrail furling loop
- Custom roller (ref on deck plan)

#### 209.01 Forward Transverse Beam

See *Gem longitudinal & transverse fwd beams*

The forward beam is to be carbon fiber:

- Length: 10200 mm
- Section: 450 x 260 mm

- Weight: r.h.d. kg estimated

**Fittings:**

- Hull foundation attachments
- Longeron attachment
- Maststep foundations
- Maststep stay attachments
- Chambers for hydraulic lines and electric wiring (if required)
- Ground strap for headstays
- Netting attachment
- Access plates for internal systems



- |                       |            |
|-----------------------|------------|
| • Information Source: | Researcher |
| • Type:               | RF-90-6    |
| • Purpose:            | Hydrologic |
| • Frequency:          | 60 Min     |
| • Wavelength:         | 235 km     |
| • Frequency Foil:     |            |
| • Information Source: | Researcher |

Future research is needed to determine the extent to which the findings of this study can be generalized to other populations and settings.

संस्कृत संस्कृत

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අත්සන ලැබෙන්නාගේ පාලන අවධිය තුළ ප්‍රධාන අමාත්‍යවරයාගේ නිලධාරීන් සහ (විශේෂයෙන්) උප-අමාත්‍යවරයාගේ නිලධාරීන් සමඟ සම්බන්ධතා පිළිබඳව විමර්ශනය කළේය.

၇၀/၂ နားထိုးမှု ခံနိုင်ရည် ၇၇ မာထရုန်းသစ်  
 ပြာသုတေသန ၁၅၁ မိုး မြေရုံ၊ ၁၈၆ စီမံခန့်ခွဲမှု၊ ဒီပဲယင်း၊ ကောသလပြည်နယ်၊ ပုသိမ် ကုမ္ပဏီ၊ နားထိုးမှု၊ ပြာသုတေသန

224 *Wafarits & Shagis*

27 RIMMING RIGGING

[illegible]

သန့်ရှင်းစွာ ပေးအပ်ပါမည့် နည်းလမ်းကို ရှာဖွေရန် နည်းလမ်းများကို ရှာဖွေရန်

- ସିଡ଼ିସିମା ଡିଭିଜନର ଦ୍ଵାରା ଶିକ୍ଷାଗ୍ରାହୀୟଙ୍କୁ 100 ଥରରୁ ଅଧିକ ଥର 1000ଟି ଟଙ୍କା ଏ  
 • ସାହାଯ୍ୟ(ଗ୍ରାଣ୍ଟ) ଟଙ୍କା ଦିଆଯିବ। ଡିଭିଜନର ଅଧ୍ୟକ୍ଷଙ୍କ ଦ୍ଵାରା

<sup>1</sup>ପ୍ରତିପାଦ୍ୟମାନେ ଏହି ଏକ ସାଧାରଣତାତ୍ପର୍ଯ୍ୟବଶୀନେ ବ୍ୟବହାର କରନ୍ତି.

STANDING RUGGING

## GEMRB Project Contract Specifications

Van Peteghem &amp; Lauriol Prévost Naval Architects

- \* Type: Carbon
- \* Profile: S8
- \* Length: 47 m
- \* Weight: 123 kg

12B.02 Staystiff

Furling system for the Staystiff will be controlled at both flybridge helm stations.

- \* Manufacturer: Rockman
- \* Type: RF-90-S.S
- \* Power: Hydraulic
- \* Flow: 45 l/min
- \* Weight: 98 kg

## Headstay Foil:

- \* Manufacturer: Rockman
- \* Type: Carbon
- \* Profile: S7
- \* Length: 36 m
- \* Weight: 71 kg

12C RIGGING MISCELLANEOUS

The following will be provided:

- \* 2 hydraulic halyard tension cylinders for the:
  - \* 1 x Yankee Type: TBD
  - \* 1 x Staystiff Type: TBD
- \* 1 hydraulic rod rigging cutter
- \* 3 double ratchet handles for manual back up functions
- \* 3 single ratchet handles for manual back up functions

23. SAITS

Soils will be supplied by the Owner. The yard will support the production, delivery and fitting out of the sails.

The inventory and dimensions are provisional pending final design.

23.01 Inventory23.01.01 Main

Primary material:	t.b.d.
Secondary material:	t.b.d.
Dimensions:	47.3 Luff
	15.5 foot
	522 m <sup>2</sup> Approx area

23.01.02 Sailent

Primary material:	t.b.d.
Secondary material:	t.b.d.
Dimensions:	45.2 Luff
	14.7 LP
	326 m <sup>2</sup> Approx area

23.01.03 Staytail

Primary material:	t.b.d.
Secondary material:	t.b.d.
Dimensions:	34.5 Luff
	4.9 LP
	172 m <sup>2</sup> Approx area

23.01.04 Square Jib

Primary material:	t.b.d.
Secondary material:	t.b.d.
Dimensions:	22.4 Luff
	5.6 LP
	65 m <sup>2</sup> Approx area

23.01.04 Genoa/Jib

Dimensions:	590 m <sup>2</sup> approx.
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23.01.05 Asymmetrical spinnaker

Dimensions:	1000 m <sup>2</sup> approx.
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Page 123 of 123

28 April 2003

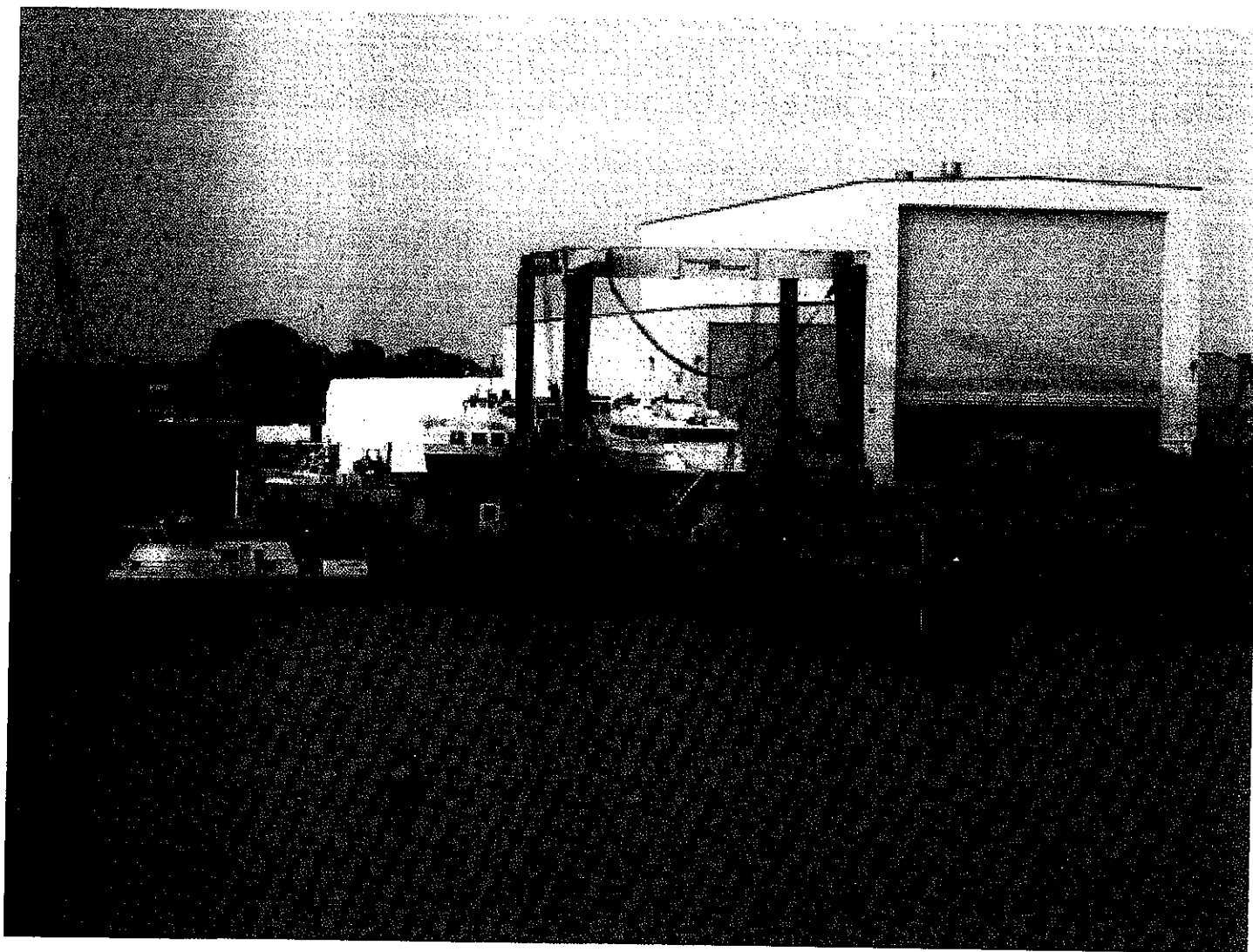
The tender will provide for receiving and storage of the tender.  
The tender will work with the Owner's Representative and suppliers to provide necessary  
checks and handling equipment for the storage, handling and receiving of the tender.

The tender will be owner supplied.

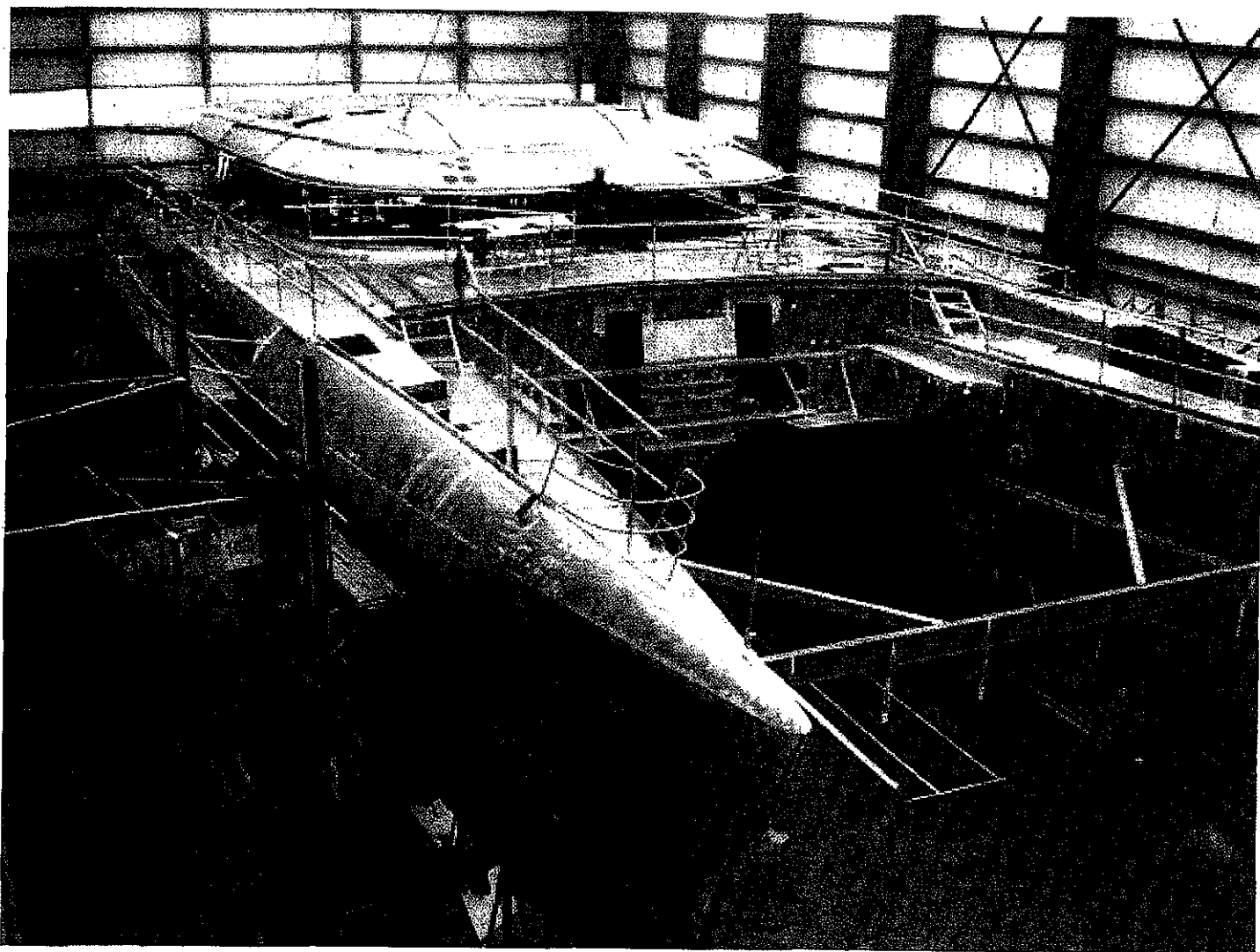
TENDERS

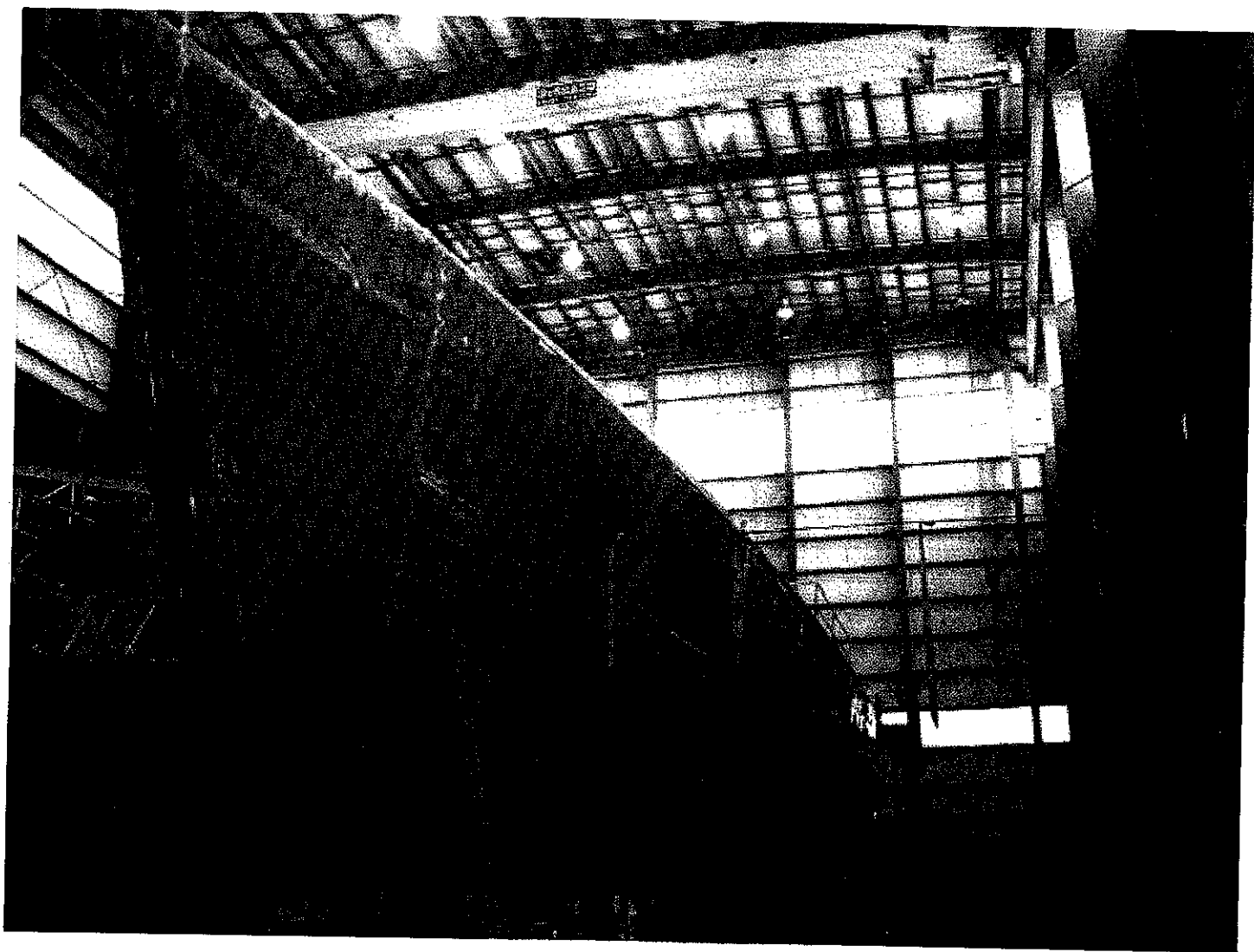
24

# **EXHIBIT 4**









# **EXHIBIT 5**

**GEMINI II LTD**  
Cayman Business Park, A7,  
P.O. Box 10300 APO  
Grand Cayman,  
Cayman Islands

July 10, 2008

*Via electronic mail*  
[pauld@derecktor.com](mailto:pauld@derecktor.com)

Derecktor Shipyards Conn., LLC  
Attn: Mr. Paul Derecktor  
837 Seaview Drive  
Bridgeport, CT 06607

Re: Movement of Vessel - Gemini Project

Dear Sirs:

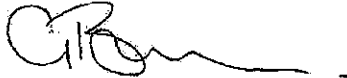
We wish to confirm the direction conveyed orally earlier today to Messrs. Derecktor and Gallagher by Gemini II Ltd. ("Owner") with respect to the project named "GEMINI," Builder's Hull No. 85135 (the "Vessel").

We were advised recently that Derecktor Shipyards Conn., LLC ("Builder") intends to move the Vessel from the current building to another shed enclosed on three sides by stacked shipping containers and a corrugated roof. The shed is open on one side. The shed does not have mezzanines, heat, electrical power, or plumbing facilities. Despite a request for a copy of the Certificate of Occupancy for the shed, no such Certificate has been produced to us. Similarly, although we have asked to review insurance policies as required by the Vessel Construction Agreement dated as of June 30, 2005 (the "Contract") to determine whether the Vessel has been properly insured, we have only received a renewal notice which does not follow the requirements of the Contract (liability and deductible). Furthermore we have received no indication that the premium payments are current.

We also understand that given the current status of the interior work there is a concern as to the leveling of the Vessel and the impact on the proper completion of the interior. Finally, you are well aware that, as you advised on or about June 13, 2008, the Builder has redirected its resources and has effectively stopped work on the construction of the Vessel except as may be necessary for the movement of the Vessel.

Under these circumstances, Owner has advised you that it objects to any movement of the Vessel. Owner has also instructed you that you are required, pursuant to the Contract, to resume full time work on the Vessel in its current location.

Very truly yours,

A handwritten signature in black ink, appearing to read 'G. Bladen', with a long horizontal flourish extending to the right.

Gavin Bladen  
Owner's Representative

cc: Barry Grossman, Esq.  
Ellenoff Grossman & Schole LLP

# 5467935\_v1

# **EXHIBIT 6**



**From:** jgall@derecktor.com [mailto:jgall@derecktor.com]  
**Sent:** Friday, July 11, 2008 9:25 AM  
**To:** captain@sy-hemisphere.com  
**Cc:** dmcMahon@barwol.com; pauld@derecktor.com; Forsberg, Lars (NYC - X73316); jsgpsg@aol.com  
**Subject:** RE: Movement of the vessel

Gavin,

This is to confirm my earlier conversation with you (7:45 AM today) that Derecktor will not move Gemini to the container shed this weekend. We will complete the Quonset building and get a Certificate of Occupancy before moving the boat to the building. I will also get you information on the keel blocking system and building's floor strength later today.

Regards,  
John

---

**From:** Gavin Bladen [mailto:captain@sy-hemisphere.com]  
**Sent:** Thursday, July 10, 2008 11:53 PM  
**To:** toni@egsilp.com  
**Cc:** Paul Derecktor; John Gallagher  
**Subject:** FW: Movement of the vessel

Dear Toni,  
Due to receiving an 'out of office' response from your colleague Mr Barry Grossman, please find the attached information for your reference on his behalf.  
Best regards,  
Gavin Bladen

---

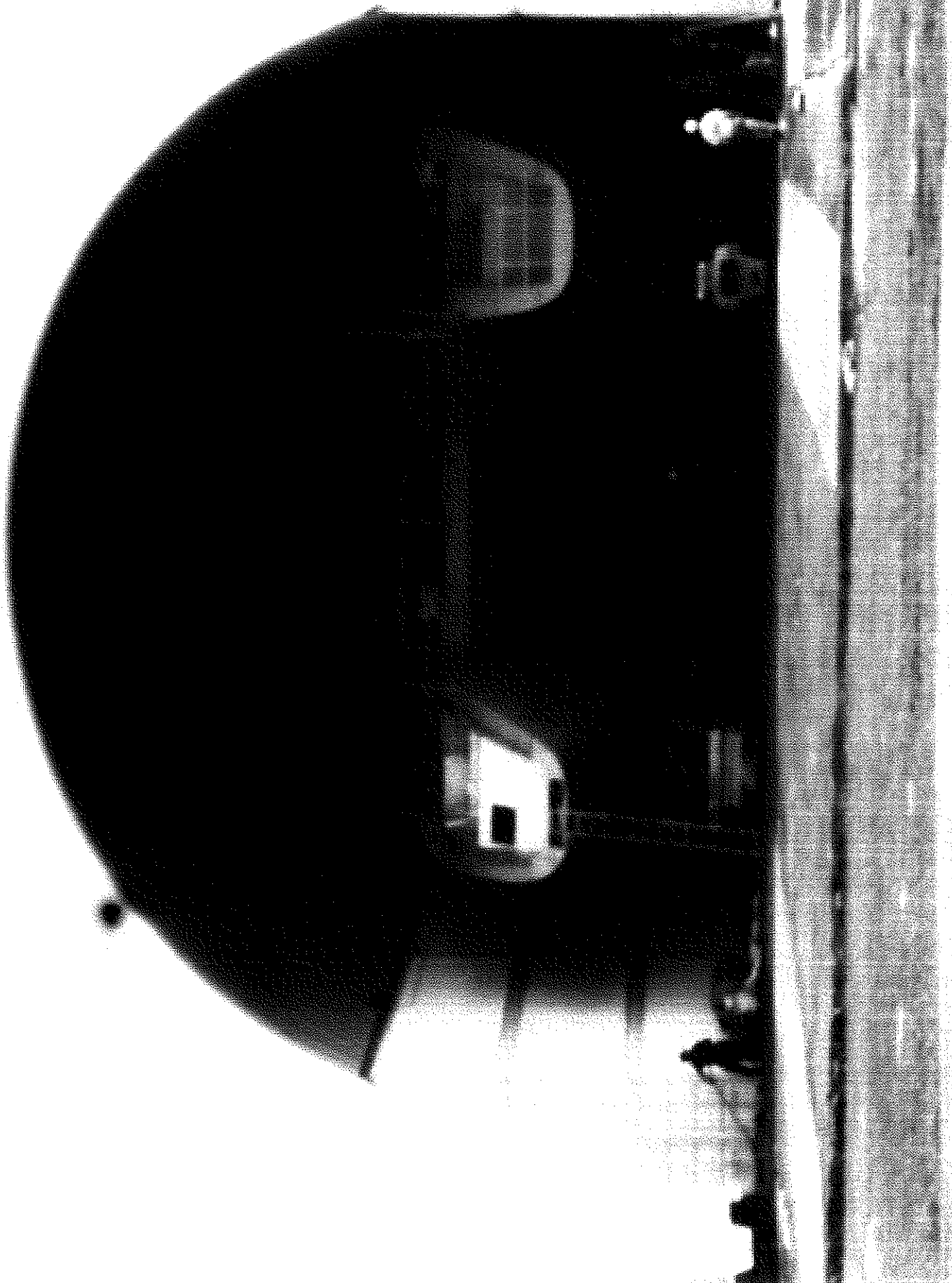
**From:** Gavin Bladen [mailto:captain@sy-hemisphere.com]  
**Sent:** Thursday, July 10, 2008 11:15 PM  
**To:** 'pauld@derecktor.com'  
**Cc:** 'bigrossman@egsilp.com'; 'jgall@derecktor.com'  
**Subject:** Movement of the vessel

Dear Paul,  
Please find attached a letter relating to today's conversation on DSY's intentions to relocate the vessel and productivity onboard.  
Best regards,  
Gavin

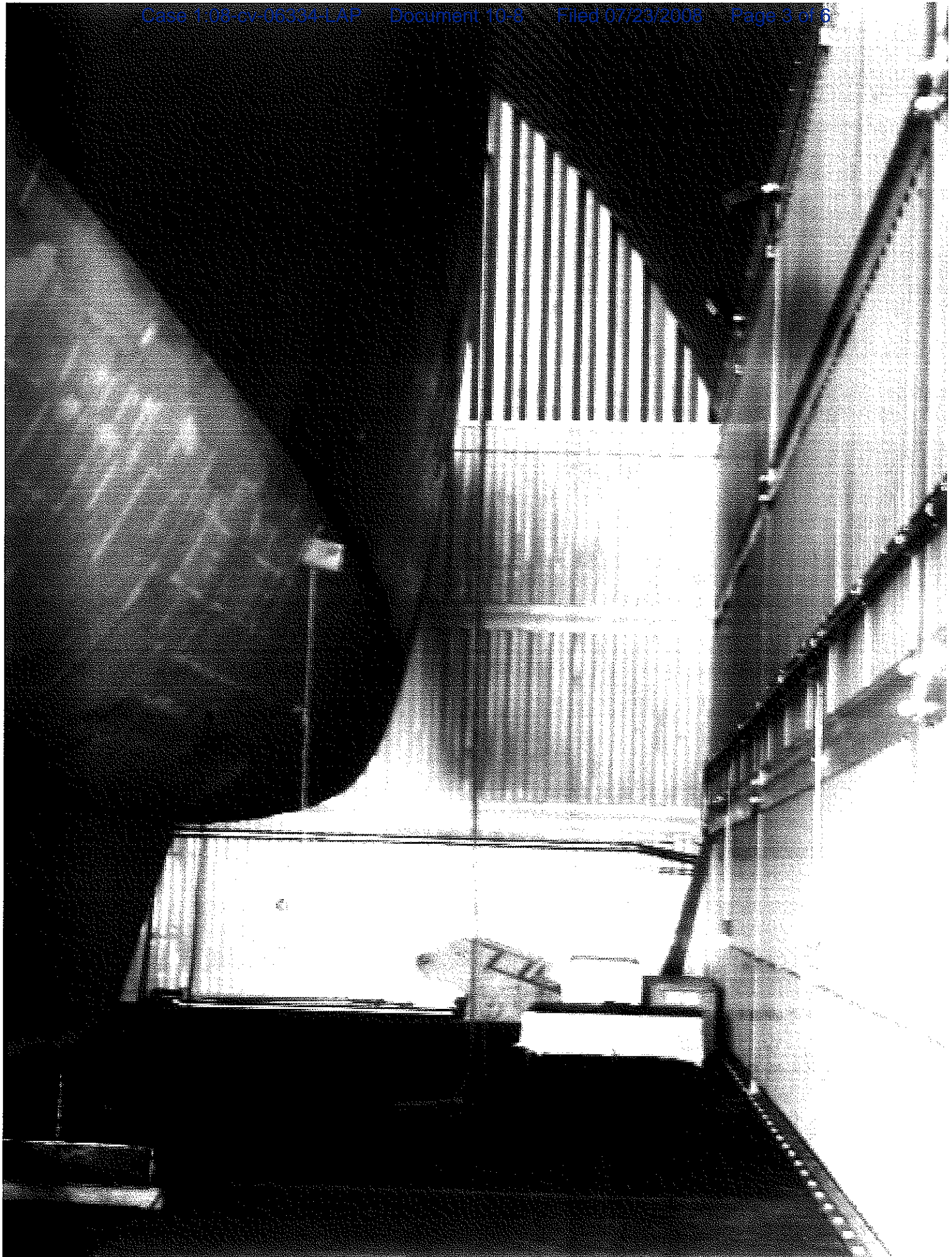
\*\*\*\*\*Confidential Communication\*\*\*\*\*

This message, together with any attachments, is intended only for use by the individual or entity

# **EXHIBIT 7**



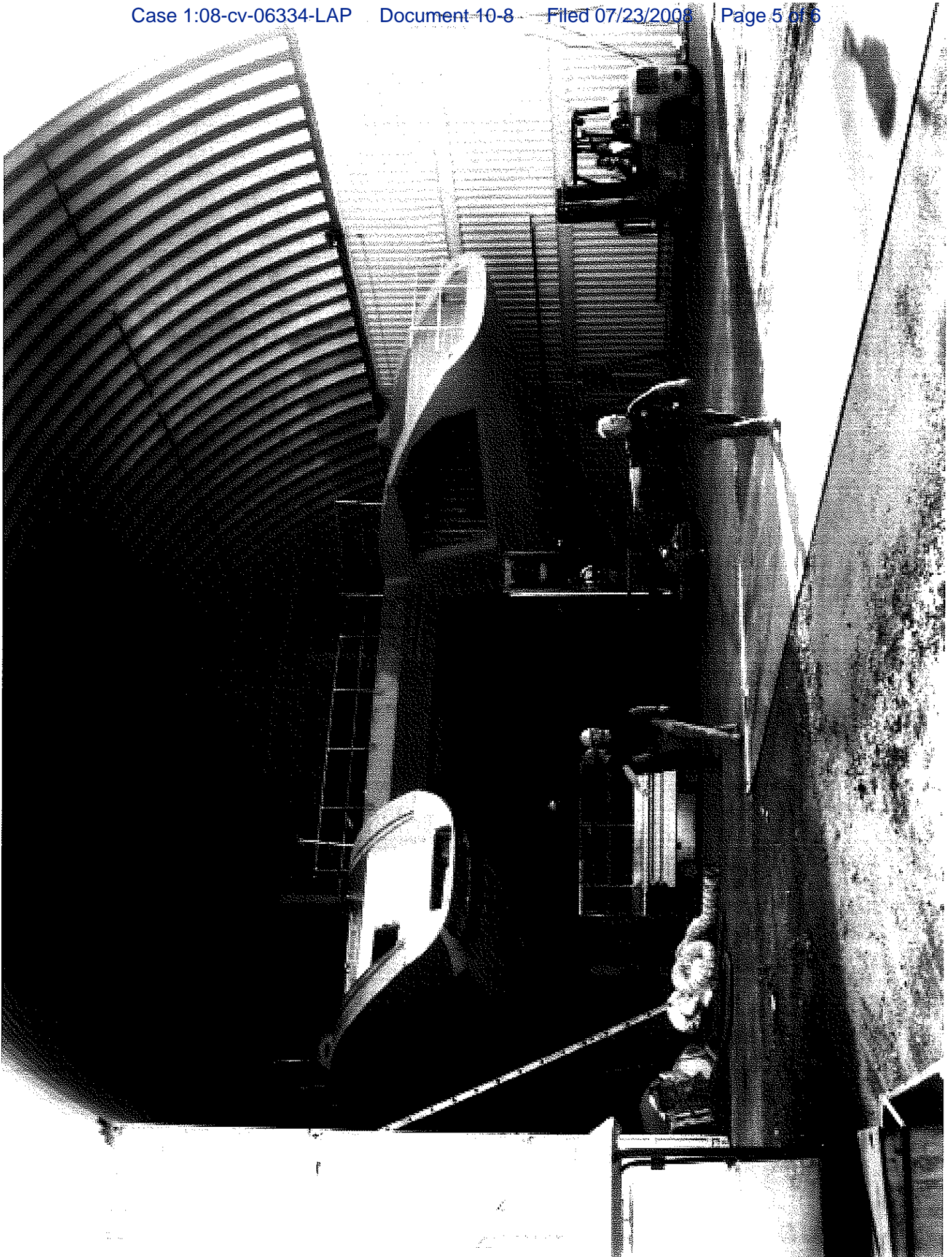




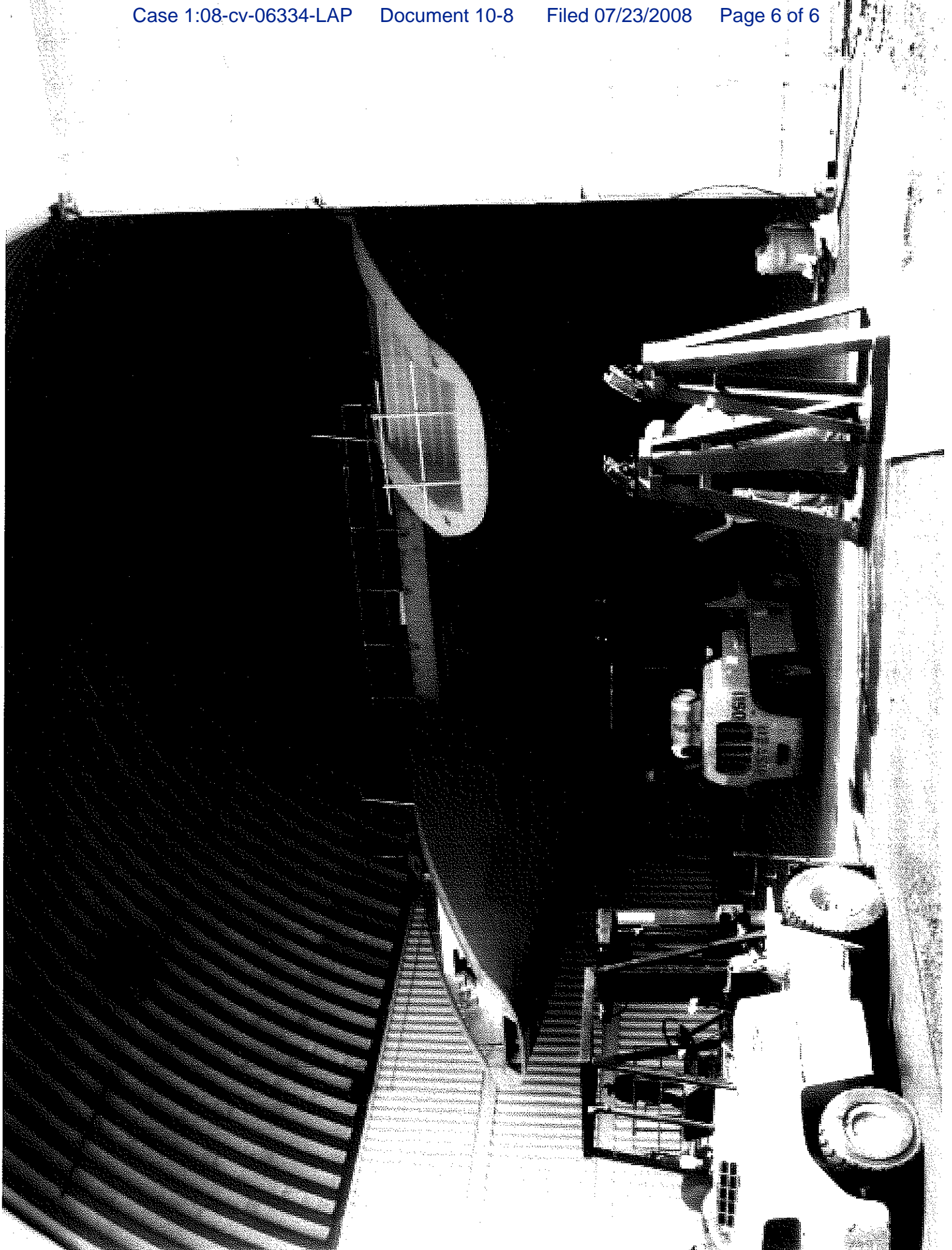












# **EXHIBIT 8**

CITY OF BRIDGEPORT  
BUILDING DEPARTMENT

Permit No. 07462  
 Receipt No. 07462  
 Date Issued  
 Special Conditions on Rear

To Erect Interim Utility Building  
 Site Address 837 Seaview Ave  
 Owner Derechtor Shygarah  
 Address 837 Seaview Ave  
 Bridgeport, CT 06607  
 Telephone 203-496-2667  
 Prime Contractor Derechtor Shygarah  
 Address Contractor

Telephone  
 Architect-Engineer Atlantic Engineering  
 Ct Registration No. 14358  
 Address 525 John Street  
 Bridgeport, CT 06607  
 Telephone 203-336-4422

Value of Work \$267,000

Bridge Dept. Est.

Mail Permit To

Name Derechtor Shygarah  
 Address 837 Seaview Ave  
 Bridgeport, CT 06607  
 Telephone 203-496-2667

FEES (OFFICE USE ONLY)  
 Building Fee \$5360.00  
 Occupancy Fee \$25.00  
 Full Fee  
 Total \$5385.00

600-16C

OFFICE USE ONLY	Flood Zone	Use Group	Floor Load	Fire Grading	Occup. Load	Type Const.	Code Version
		U		244		2-B	2005
		Length	Width	Height		Stories	Area
Dimensions	New Const.						
	Existing	163' 10"	87' 6"				
Sprinklers:	<input type="checkbox"/> Required	<input type="checkbox"/> Hazard Class		Water Demand, PSI		GPM	

TYPE OF CONSTRUCTION

Exterior Walls	Floor /Roof	Interior Frame
<input type="checkbox"/> Combustible <input checked="" type="checkbox"/> NonCombustible	<input type="checkbox"/> Combustible <input checked="" type="checkbox"/> NonCombustible	<input type="checkbox"/> Combustible <input checked="" type="checkbox"/> NonCombustible

TYPE OF IMPROVEMENT

- ☒ New construction  
☐ Addition  
☐ Alterations  
☐ Interior ☐ Exterior  
☐ Repairs  
☐ Other

USE GROUP(S)

RESIDENTIAL

- ☐ One Family ☐ Two family  
☐ Three or more family # units  
☐ Hotel-Motel-Rooming House  
☐ Garage # Cars  
☐ Shed or Other

SWIMMING POOL

- ☐ Private (1 Family Dwelling)  
☐ Public (State Health Dept. approval required)

NON-RESIDENTIAL

- ☐ Assembly, Church, Restaurant, etc.  
☐ Office, Bank, Professional  
☐ Educational 12th Grade or less  
☒ Industrial  
☐ Institutional

Change of use:

New:

Existing:

Describe Work To Be Done Fully:

Construction of an interim utility building as a storage and weather shelter for sand blasting and performing service work on vessels (work normally done outside)

As Approved By  
 P#Z 4-28-08

The Coastal Site Plan Review was conducted and approved in accordance with Sections 11 through 15 of Public Act 79-535 (the Connecticut Coastal Management Act) on 7/14/08

HOLD HARMLESS / RELEASE

City of Bridgeport and Bridgeport Building Department require that permittee shall indemnify and hold harmless "City/Department", its employees and agents and release both from any and all claims or actions brought by third parties for injuries or damages of property in connection with granting of this permit and work to be performed there under. Permittees may be required to insure against such claims in amounts appropriate to meet such obligation. City/ Department shall have the right to review and specify such amount and scope of coverage as it may deem appropriate for activities conducted under this permit.

The owner acting herein by and through his agent, licensed Engineer or Architect of the above described property hereby approves this application and agrees to comply with all appropriate statutes of the State of Connecticut and all regulations of the Connecticut State Building Code and to do no work not specifically covered by this application.

I declare under penalties of perjury that this application, including any accompanying plans, specifications, etc. has been examined by me and to the best of my knowledge and belief is a true, correct and complete statement of the work to be covered by this application. The proposed work is authorized by the owner in fee and applicant is authorized to make such application and that I am the agent, Licensed Engineer, or Architect employed by the owner to the proposed work.

ZONING APPROVAL

Block 600 Lot 16C

APPLIED FOR

ZONING COMPLIANCE ONLY  
 ZONING DEPARTMENT  
 CITY OF BRIDGEPORT, CT

☐ Z B A


HEALTH DEPARTMENT

AM 9:41

FIRE MARSHAL



# **EXHIBIT 9**



2003  
PLAN REVIEW RECORD

# 2003 INTERNATIONAL BUILDING CODE®

Plan Review # 1732

Date: \_\_\_\_\_

Valuation: \_\_\_\_\_

Fee: \_\_\_\_\_

JURISDICTION: BRIDGEPORT  
(City, County, Township, etc.)

BUILDING LOCATION: 837 SFAUTHAUX AVE  
(Street address)

BUILDING DESCRIPTION: SINGLE STORY 2B

REVIEWED BY: AK

Numbers indicated in parentheses are applicable code sections of the 2003 International Building Code. The plan review accomplished as indicated in this report is limited to those code sections specifically identified herein. This record references commonly applicable code sections. It does not reference all code provisions which may be applicable to specific buildings. This record is designed to be used only by those who are knowledgeable and capable of such and a complete judgement in evaluating construction for compliance with code requirements.

CORRECTION LIST		
No.	DESCRIPTION	Code Section
①	DWG S-2 DETAILS 1, 2, & 3 INDICATE EXISTING PILE CAP & FOUNDATION WHEN WERE PILES & PILE CAPS DRIVEN? WHAT WAS DESIGN LOADS FOR PILES? IF PILES & CAPS ARE NEW, WE NEED DESIGN CRITERIA, PILE DWGS, DETAILS, ETC. IF EXISTING WOOD A LETTER FROM ENGINEER THAT EXISTING PILES ARE ADEQUATE TO SUPPORT THE NEW STRUCTURE.	106
②	PROVIDE DWGS & DETAILS FOR END WALL & DOOR BT BIL TOP STRUCTURES. END WALL & DOOR WILL HAVE TO MEET REQUIREMENTS FOR 100 MPH WIND SPEED. DWGS NEED TO BE SIGNED & SEALED. SUPPORT STRUCTURE FOR DECK?	106
③	BUDG DOES NOT MEET REQUIREMENTS FOR WINDOW LBS. STORT. PROVIDE MIN. REQUIRED	

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**INTERNATIONAL CODE COUNCIL, INC.**  
PHONE 1-800-786-4452 • WWW.ICCSAFE.ORG

CORRECTION LIST (cont'd.)		
No.	DESCRIPTION	Code Section
	OPENINGS FOR LENGTH OF WALL ON AT LEAST 2 SIDES MIN 20 SF PER 50 LINEAL FT OF WALL 903.2.10.1	
④	PROVIDE DOOR SCHEDULE INDICATING SIZE OF DOOR TYPE MATERIAL HARDWARE ETC. LABEL ALL DOORS ON PLAN.	106
⑤	SEPARATION OF EXITS IS REQUIRED TO BE 1/2 DIAGONAL OF BLOC. DOORS SHOWN ARE NOT SEPARATED BY CORRECT DISTANCE	104.2.1
⑥	INDICATE TYPE OF DRAINAGE SYSTEM FOR FLAT ROOF AREAS.	1503.4
⑦	PROVIDE DESIGN LOADS FOR FLOOR SLAB	1607.1
⑧	PROVIDE STATEMENT OF SPECIAL INSPECTIONS FOR CONC, REBAR, WELDS ETC.	1704
⑨	PROVIDE POWER & LIGHTING PLANS PROVIDE SERVICE DWGS ETC.	
⑩	REVISIONS ETC APPROVAL PRIOR TO ISSUING PERMIT.	